
INPUT

VENDOR ANALYSIS
PROGRAM



SUNGARD DATA SYSTEMS INC.

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Chairman &

CEO:	James L. Mann
Status:	Public Corporation
Stock Exchange:	NASDAQ, LSE
Total Employees:	2,200 (11/93)
Total Revenue:	\$324,570,000
Fiscal Year End:	12/31/92

Key Points

- SunGard Data Systems seeks to grow through both internal development and acquisitions. During 1993 alone, the company has already made eight acquisitions, expanding its offerings in investment support systems for the financial services industry and the midrange and low-end market for disaster recovery services.
- SunGard is continuing to evolve its mainframe-based investment support systems by converting some systems to client/server technology and by developing microcomputer front-end products to others. Ongoing product unification and enhancements include common graphical interfaces and shared databases.
- During 1992, SunGard significantly improved operating margins in its disaster recovery business through cost containment and more efficient use of capacity in the company's disaster recovery centers. SunGard has merged its San Diego hotsite into other existing hotsite facilities and opened five Work Group Recovery MetroCenters throughout the U.S.
- During 1992, for the seventh consecutive year, SunGard successfully supported all customers who experienced computer center failures, including five customer recoveries from underground flooding in Chicago. In early 1993, SunGard successfully supported its five customers whose operations were disrupted by the World Trade Center bombing.

**Company
Description**

SunGard Data Systems Inc. provides a family of proprietary investment support systems for the financial services industry via remote processing and software licenses. The company also provides disaster recovery and associated consulting services and offers utility processing, direct marketing, mass mailing and various printing services.

Strategy

SunGard seeks to grow through both internal development and the acquisition of businesses that broaden or complement its existing product lines. Since its initial public offering in 1986, the company has acquired 11 investment support systems companies, ten disaster recovery businesses, and two computer services businesses.

The company's primary focus for its investment support systems is to:

- Integrate and enhance the breath of its product line.
- Develop new products based on open systems and downsized platforms.
- Capitalize on the company's reputation and distribution network in international markets.
- SunGard plans to continue development work on certain investment support software products (ON-SITE and GSM) for client/server environments, an IBM RS/6000 version of INVEST ONE, and a microcomputer version of OMNIPLAN.
- SunGard continues to add multi-currency functionality to its systems and pursue opportunities to market more of its systems internationally, especially in Europe.

Financials

SunGard's 1992 revenue reached \$324.6 million, a 14% increase over 1991 revenue of \$283.6 million. Net income rose 20%, from \$21.5 million in 1991 to \$25.8 million in 1992. A five-year financial summary follows:

**SUNGARD DATA SYSTEMS INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	1992	1991	1990	1989	1988
Revenue	\$324.6	\$283.6	\$262.1	\$201.1	\$164.8
• Percent increase from previous year	14%	8%	30%	22%	N/A
Income before taxes	\$45.4	\$38.3	\$36.6	\$28.3	\$24.5
• Percent increase from previous year	18%	5%	29%	15%	N/A
Net income	\$25.8	\$21.5	\$20.5	\$17.1	\$15.8
• Percent increase from previous year	20%	5%	20%	8%	N/A
Earnings per share (fully diluted)	\$1.59	\$1.36	\$1.34	\$1.22	\$1.13
• Percent increase from previous year	17%	1%	10%	8%	N/A

Product development expenses were approximately \$23.4 million (7% of revenue) in 1992, \$13.4 million (5% of revenue) in 1991, and \$13.8 million (5% of revenue) in 1990.

Costs and expenses as a percent of revenue have remained relatively stable for SunGard over the past three years. A chart of costs and expenses as a percentage of revenue for the past three years follows:

**SUNGARD DATA SYSTEMS INC.
THREE-YEAR COSTS AND EXPENSES
(expressed as a percentage of revenue)**

ITEM	FISCAL YEAR		
	1992	1991	1990
• Cost of sales and direct operations	47%	50%	49%
• Sales, marketing, and administration	21%	21%	22%
• Product development	7%	5%	5%
• Depreciation	5%	5%	5%
• Amortization	4%	4%	4%
TOTAL	84%	85%	85%

Revenue for the nine months ending September 30, 1993 reached \$276.2 million, a 19% increase over \$232.2 million for the same period in 1992. Net income was \$27.9 million, an increase of over 49% over \$18.6 million for the same period a year ago. Results for 1993 include a \$3.4 million after-tax gain from the sale of SunGard's automotive dealership system product line in early 1993.

Market Financials

INPUT estimates the majority of SunGard's revenue is derived from the banking and finance industry. The remainder is derived from clients primarily in insurance, manufacturing, distribution and utilities industries and state and local government.

SunGard's investment support systems are provided primarily to the financial services industry, including domestic and international banks and other financial institutions, brokers/dealers, mutual funds and transfer agents, insurance companies, investment advisors, retirement plan managers and other portfolio managers. Other clients include governments and large corporations.

Disaster recovery services are provided primarily to users of IBM and compatible mainframes and DEC, Hewlett-Packard, IBM midrange, Prime, Stratus, Tandem, Texas Instruments and Unisys computers.

INPUT estimates SunGard's \$289 million in U.S. information services revenue for 1992 was derived approximately as follows:

Processing services	70%
Applications software	21%
Professional services	8%
Systems operations	<u>1%</u>
	100%

A three-year summary of source of revenue and operating income, as provided by SunGard Data, follows:

**SUNGARD DATA SYSTEMS INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1992		1991		1990	
	\$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Revenue						
Investment support systems	\$195.9	60%	\$165.4	58%	\$151.7	58%
Disaster recovery services	94.7	29%	83.5	29%	74.8	28%
Computer services and other	34.0	11%	34.6	13%	35.6	14%
TOTAL	\$324.6	100%	\$283.5	100%	\$262.1	100%
Operating income						
Investment support systems	\$40.3	80%	\$36.0	85%	\$33.7	84%
Disaster recovery services	12.7	25%	8.0	19%	7.4	18%
Computer services and other	3.5	7%	4.4	10%	4.0	10%
Corporate administration	(6.2)	(12%)	(5.9)	(16%)	(4.8)	(12%)
TOTAL	\$50.3	100%	\$42.5	100%	\$40.3	100%

Investment support systems revenue increased 18% (\$30.4 million) during 1992.

- The acquisitions of Shaw Data Services and AJL accounted for approximately \$13.3 million and \$1.1 million of the 1992 increase, respectively.
- The balance of the 1992 increase is attributed to increases in software maintenance and remote processing revenues of \$7.2 million, or 6%; an increase in software license revenues of \$4.4 million, or 22%; and an increase in professional services revenues of \$4.4 million, or 22%.

Disaster recovery services revenues increased 13% (\$11.2 million) in 1992, including an \$11.8 million increase in alternate-site services revenue offset by a \$0.6 million decrease in software maintenance, license and professional services revenues.

Computer services and other revenues decreased \$0.6 million in 1992 due to the September 1991 sale of a small, unprofitable product line and a decrease in certain royalties, offset in part to increased sales of automotive dealership systems and remote-access computer services.

Recurring revenues derived from remote processing services, alternate-site recovery services, and software maintenance were approximately \$267 million, \$235 million and \$213 million in 1992, 1991, and 1990, respectively.

Geographic Markets

Approximately 89% of SunGard's 1992 revenue was derived from the U.S. and 11% from international sources. A three-year summary of geographic source of revenue follows:

SUNGARD DATA SYSTEMS INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)

ITEM	FISCAL YEAR					
	1992		1991		1990	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$288.9	89%	\$254.3	90%	\$235.9	90%
International	35.7	11%	29.3	10%	26.2	10%
TOTAL	\$324.6	100%	\$283.6	100%	\$262.1	100%

Operations/ Structure

SunGard's operations are decentralized and its management philosophy is one of "controlled entrepreneurship." Products and services are provided through various separate business units, which are organized into five groups of related businesses as follows:

- SunGard Trust and Shareholder Systems Group provides trust and investment accounting, portfolio management, and employee benefit plan systems for financial institutions and corporations; and mutual fund, stock, and bond accounting systems for mutual funds, transfer

agents and corporations. Subsidiaries/businesses within this group include:

- Shaw Data Services, Inc. New York (NY)
- SunGard Asset Management Systems Birmingham (AL)
- SunGard Employee Benefit Systems Birmingham (AL)
- SunGard Shareholder Systems Inc. San Mateo (CA)
- SunGard Trust Systems Inc. Charlotte (NC)
- SunGard Investment Systems Inc. Hinsdale (IL)
- SunGard Financial Systems Group provides portfolio management and securities trading and accounting systems via processing and applications software for financial institutions, brokers/dealers, governments and corporations. Subsidiaries/businesses within this group include:
 - SunGard Financial Systems Inc. Canoga Park (CA)
Hopkins (MN)
Waltham (MA)
- SunGard Capital Markets Systems Group (formerly Derivative Instrument Systems) provides trading, risk management and accounting systems via processing and applications software for derivative instruments and securities for international financial institutions. Subsidiaries/businesses within this group include:
 - SunGard Capital Markets Inc. Frankfurt (Germany)
London (England)
New York (NY)
Tokyo (Japan)
- SunGard Recovery Services Group provides alternate site backup, testing and recovery processing services for IBM, DEC, Hewlett-Packard, Prime, Stratus, Tandem and Unisys computer installations; and recovery planning software and related consulting and educational services. Subsidiaries/businesses within this group include:
 - SunGard Recovery Services Inc. Wayne (PA)
 - SunGard Planning Solutions Inc. Wayne (PA)

- SunGard Computer Services Group provides remote-access IBM computer processing and outsourcing and automated mailing services. Subsidiaries/businesses within this group include:

- SunGard Computer Services Inc. Philadelphia (PA)
- SunGard Mailing Services Birmingham (AL)

Employees

As of December 31, 1992, SunGard had approximately 2,090 employees. The company currently has approximately 2,200 employees worldwide.

Acquisitions

In November 1993, SunGard acquired Computer Recovery Services Corp. of Scottsdale (AZ), a provider of disaster recovery services for Unisys installations.

In October 1993, SunGard acquired Digital Solutions Inc., a Minneapolis-based provider of brokerage trading floor management software for banks and bank-holding companies with annual revenue of approximately \$7 million. Digital Solutions' primary product is In Trader™, a workstation, LAN-based package for Sun, HP and other UNIX-based systems.

In August 1993, SunGard acquired the disaster recovery business of Atlanta-based Sun Data, Inc., the nations leading provider of disaster recovery services for IBM AS/400 systems.

In June 1993, SunGard acquired UPTIME, expanding SunGard's disaster recovery capabilities into the mobile recovery service arena for HP, DEC, and IBM AS/400 systems.

In May 1993, SunGard acquired Information Systems of America (ISA) from Sprint Corporation. ISA, with annual revenue of about \$12 million, is an Atlanta-based provider of investment management and accounting software for the insurance industry.

In May 1993, SunGard acquired subscriber contracts and two recovery centers from LDI Corporation for computer disaster recovery services. LDI's Cleveland hot site will serve as SunGard's newest recovery center for recovery and testing, focusing primarily on mid-size IBM platforms, including the IBM 43xx and IBM 200E and smaller configurations. LDI's Detroit site will become a SunGard MetroCenter, a facility that can accommodate remote testing and recovery operations.

In January 1993, SunGard purchased the London-based capital markets systems business of ICCH Financial Markets Limited for approximately \$1.5 million in cash. The primary product line of the acquired business, FORTE, is a back office trading, clearing and administration system for exchange-traded derivative instruments.

Also in January 1993, SunGard purchased the FIRST FUTURES product line of London-based Micro-Tech Financial Systems (Europe) Limited. FIRST FUTURES is an analysis system for exchange-traded and equity derivative instruments.

In October 1992, SunGard acquired AJL Holding AB of Stockholm (Sweden) for approximately \$7.1 million plus contingent payments based on future performance. AJL is a capital market systems company whose major product, OPTAS, is a front office trading and risk management system for exchange-traded and equity derivative instruments.

In July 1992, SunGard acquired Shaw Data Services, Inc. and its affiliates for \$14.5 million plus contingent payments based on future performance. Shaw Data Services, with annual revenue of about \$30 million, is the largest domestic provider of portfolio management and performance measurement systems and computer services to institutional investment organizations.

Divestitures

In February 1993, SunGard sold its CARS automotive dealership systems product line to Automatic Data Processing, Inc., resulting in an after-tax gain of approximately \$3.4 million. The CARS product line was originally acquired by SunGard with DYATRON Corporation in 1989 and contributed approximately \$14.3 million to 1992 revenue.

Key Products and Services

Descriptions of SunGard's products and services separated by application area are as follows:

Investment Support Systems:

SunGard delivers its investment support systems primarily as remote processing services using SunGard computer equipment and also through software licenses for use on the customer's own computers.

- The systems automate the complex accounting calculations, recordkeeping, and reporting associated with investment operations.
- SunGard's investment support system offerings (excluding acquisitions made in 1993) are summarized in the exhibit.

EXHIBIT

SUNGARD INVESTMENT SUPPORT SYSTEMS

SYSTEM	HARDWARE PLATFORM	MODE OF DELIVERY	PRIMARY MARKETS
Investment Accounting and Portfolio Management			
INVEST ONE ^R	IBM mainframe UNIX workstation	Remote processing & software license Software license	International banks, large bank trust departments, mutual funds, insurance companies and other financial institutions
ON-LINE TM	Bull mainframe	Remote processing	Investment advisors, brokers/dealers, mutual funds and other portfolio managers
ON-SITE TM	UNIX workstation	Software license	Investment advisors, brokers/dealers, mutual funds and other portfolio managers
MICROSHAW TM	Microcomputer	Software license	Investment advisors, brokers/dealers, mutual funds and other portfolio managers
SERIES 2 TM	IBM mainframe Prime UNIX workstation	Remote processing & software license Remote processing Software license	Banks, thrifts, insurance companies and other financial institutions
PMS TM	Microcomputer	Software license	Banks, thrifts, insurance cos. and other financial institutions
MONEYMAX	Prime	Remote processing	State, county and city government treasurers
Trust and Global Custody Systems			
AUTOTRUST/AT ^R	IBM mainframe	Remote processing	Medium size bank trust departments
OMNITRUST ^R ES	IBM mainframe	Software license & remote processing	Large and medium-size bank trust departments
OMNI GS TM	IBM mainframe	Software license & remote processing	Large bank global custody departments
MICROTRUST ^R	Microcomputer	Software license	Small bank trust departments

(continued)

EXHIBIT (cont.)

SUNGARD INVESTMENT SUPPORT SYSTEMS

SYSTEM	HARDWARE PLATFORM	MODE OF DELIVERY	PRIMARY MARKETS
Securities and Derivatives Trading and Accounting			
BOLT 1™, BOLT 2™	IBM mainframe	Remote processing	Domestic bank capital markets departments, brokers/dealers and other financial institutions
GSM™	DEC VAX, UNIX workstation	Software license	Domestic bank capital markets departments, brokers/dealers and other financial institutions
MONEYMARKET II ^R	DEC VAX	Remote processing & software license	Domestic bank capital markets departments, brokers/dealers and other financial institutions
PHASE3 ^R SYSTEM	Tandem	Remote processing & software license	Domestic bank capital markets departments, brokers/dealers and other financial institutions
TRAC™	IBM mainframe	Software license & remote processing	Domestic bank capital markets departments and other financial institutions
Devon Derivatives System™	Microcomputer, UNIX workstation, DEC VAX, IBM mainframe	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
Devon Futures System™	Microcomputer, UNIX workstation, DEC VAX	Software license & remote processing	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
Devon Securities System™	Microcomputer, UNIX workstation	Software license & remote processing	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
OPTAS™	DEC VAX workstation	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
Shareholder Accounting			
INVESTAR ^R	IBM mainframe	Remote processing & software license	Large mutual fund managers and transfer agents
SUNSTAR ^R	IBM mainframe	Remote processing & software license	Large bank, corporate, and utility stock and bond transfer agents

(continued)

EXHIBIT (cont.)

SUNGARD INVESTMENT SUPPORT SYSTEMS

SYSTEM	HARDWARE PLATFORM	MODE OF DELIVERY	PRIMARY MARKETS
Participant Accounting			
OMNIPLAN™	IBM mainframe	Remote processing & software license	Corporate, bank and other retirement plan managers
OMNIPAY™	IBM AS/400	Software license	Corporate, bank and other retirement plan managers
PLAN ONE ^R	IBM mainframe	Remote processing & software license	Corporate, bank and other retirement plan managers
MPR™	Microcomputer	Software license	Small and medium-size banks
Investment Reporting and Analysis			
DATAPREP™	IBM mainframe	Remote processing & software license	Corporate, bank and other retirement plan managers
EMBERS ^R	IBM mainframe	Remote processing & software license	Corporate, bank and other retirement plan managers
SUPERF4 ^R	IBM mainframe	Remote processing & software license	Corporate, bank and other retirement plan managers
OMNISTATION™	UNIX workstation	Software license	Large and medium banks

- Investment accounting and portfolio management systems maintain the books of record for all types of large investment portfolios such as those managed by banks, mutual funds, employee retirement plans and insurance companies.
- Trust systems automate the investment operations unique to the bank trust business. Global custody systems automate the functions associated with the worldwide custody and safekeeping of investment assets.
- Securities and derivatives trading and accounting systems are used primarily by the "sell-side" of the investment business--traders or dealers of securities or derivative instruments and their back office operations.

- Shareholder accounting systems automate the transfer agent process for stock, bond and mutual fund issues.
- Participant accounting systems automate the investment operations associated with defined contribution retirement plans such as 401(k) plans.
- Investment reporting and analysis systems accept accounting data from other investment support systems and perform special analyses for fund managers and customers.

SunGard provides investment support processing services from its computer centers in Birmingham (AL), Boston (MA), Charlotte (NC), Fairfield (NJ), Los Angeles (CA), Minneapolis (MN), Philadelphia (PA) and London (England).

- As of December 31, 1992, SunGard had approximately 1,400 remote processing contracts in force. These contracts generally have initial terms of from one to three years and then continue for successive one-year renewal terms.

Disaster Recovery and Related Services:

SunGard Recovery Services Inc.'s recovery services are marketed, directly and through representatives, to users of most DEC, IBM (and compatible), HP, Prime, Stratus, Tandem, Texas Instruments and Unisys computers in North America.

Most of the company's disaster recovery customers purchase a basic package of services that includes:

- Use of a hotsite for six weeks to recover from any computer center failure
- Use of a coldsite for six months if recovery operations must continue for more than six weeks
- Use of a hotsite to regularly test disaster recovery procedures
- Use of adjacent office and terminal space during recovery operations and tests
- Technical assistance when conducting recovery operations and tests
- Technical assistance with designing and implementing a backup communications network.

SunGard's MegaCenters[®] are multiple hot site and cold site facilities that customers may use directly or remotely.

- SunGard operates four MegaCenters as follows:
 - Atlanta, with eight DEC, one Prime, and one Texas Instruments hot sites
 - Chicago, with three IBM mainframe, three IBM midrange, one Tandem, and one Unisys (mobile) hot sites
 - Philadelphia, with three DEC, five IBM mainframe, three IBM midrange, three Stratus, and one Tandem hot sites
 - Warminster (PA), with one HP and six Unisys hot sites
- SunGard also operates three combined cold site and remote operations centers, located in Honolulu, Minneapolis and Toronto.
- As of December 31, 1992, SunGard had approximately 1,570 disaster recovery contracts in force. These contracts generally require the payment of monthly fees and range in duration from one to five years.
- As of December 31, 1992, the company had capacity for 880 IBM mainframe hot site contracts.

During 1992, SunGard introduced Work Group RecoverySM, a new product line that includes five multipurpose testing and recovery centers in the U.S.

- These MetroCenter facilities provide customers with the use of general office space and office equipment, as well as enhanced remote operations capabilities for using SunGard's disaster recovery systems for tests or recovery operations without traveling to a SunGard hot site.
- This new product line also includes MegaVoiceSM, a centralized voice communications recovery service that can redirect the customer's incoming telephone calls to the alternate recovery site.
- MetroCenters are located in Boston (MA), Dallas (TX), Ontario (Canada), St. Louis (MO) and Santa Ana (CA).

In October 1993, SunGard expanded its recovery service options for AS/400, HP and RS/6000 systems. SunGard's midrange customers will now be able to select from among four recovery options at time of disaster--traditional hot sites (MegaCenters), regional recovery centers

(MetroCenters), Mobile Data Centers, or replacement processors shipped to a location convenient for the customer.

Through SunGard Planning Solutions Inc., the company provides disaster recovery-related consulting and education professional services and software products.

- Professional consulting services for disaster recovery and business resumption planning include risk analyses; developing, preparing, and updating customized disaster recovery plans and manuals; and auditing customers' disaster recovery procedures and recommending improvements.
- SunGard regularly conducts seminars and industry conferences on disaster recovery and related topics.
- The company also markets DP/90 PLUS™, a microcomputer software package that automates the preparation and maintenance of disaster recovery plans.

Computer Services and Other:

SunGard provides non-proprietary, remote-access computer services primarily to software developers and government agencies and also offers outsourcing services. SunGard also provides direct marketing computer services and automated mass mailing and printing services through data centers in Philadelphia and Birmingham with IBM and compatible mainframes.

**Marketing
and Sales**

SunGard markets its investment support systems software and remote processing services via its direct sales force located in offices in Birmingham (AL), Canoga Park and San Mateo (CA), Charlotte (NC), Fairfield (NJ), Hinsdale (IL), Hopkins (MN), New York (NY), Waltham (MA), and London (England).

The company markets its disaster recovery services via its direct sales force located in Wayne (PA).

Remote access processing, automated mass mailing and printing services are marketed through direct sales forces located in Philadelphia and Birmingham.

Alliances

SunGard Recovery Services and Applied Communications Inc. (ACI) have an alliance combining SunGard's disaster recovery expertise with ACI's Tandem-specific support through its ASTech Services program to offer Tandem users enhanced subscriber testing and recoverability.

SunGard Planning Solutions has marketing relationships with LEGENT Corporation and Dialogic Communications Corporation (DCC) whereby SunGard can market LEGENT's Sunrise automated recovery software and DCC's PC-based disaster recovery telenotification software.

SunGard also has alliances/marketing agreements with various vendors as follows:

- GE Capital Computer Leasing
- Bell Atlantic Business Systems Services

Competitors

SunGard's primary competitors for its disaster recovery services include Comdisco Disaster Recovery Services, IBM (Integrated Systems Solutions Corporation), and DEC.

Although SunGard has no major competitors for its investment support systems, there are various smaller companies that compete with individual SunGard products.

COMPANY PROFILE

SUNGARD DATA SYSTEMS INC.

1285 Drummers Lane
Wayne, PA 19087
(215) 341-8700

James L. Mann, Chairman, President,
and CEO
Public Corporation, NASDAQ
Total Employees: 1,640
Total Revenue, Fiscal Year End
12/31/90: \$262,108,000

The Company

SunGard Data Systems Inc. provides a family of proprietary investment support systems for the financial services industry via remote processing and software licenses. The company also provides disaster recovery and associated consulting services, markets an automotive dealer management system (which is available as a processing service and as a software product), and offers utility processing, direct marketing, mass mailing, and various printing services.

SunGard seeks to grow through both internal development and the acquisition of businesses that broaden or complement its existing product lines. Since its initial public offering in 1986, the company has acquired six investment support systems companies, six disaster recovery businesses, and one computer services business. Also during this period, SunGard completed two additional public offerings, a common stock offering in 1987, and a convertible debenture offering in May 1990. Acquisitions made during 1990 and 1989 are summarized as follows:

- Effective December 31, 1990, SunGard purchased all of the business and assets of the Atlanta-based Disaster Recovery Services Division of National Computer Systems, Inc. (NCS) for approximately \$5 million. In connection with the acquisition, SunGard and NCS entered into a marketing agreement under which NCS will market SunGard's disaster recovery services to NCS' financial systems customers.
- In October 1990, SunGard completed a pooling-of-interests acquisition of Phase3 Systems Inc. of Waltham (MA). Phase3 markets Tandem-based security trading and accounting remote processing and software to commercial banks, brokerage firms, and other financial institutions.
- In February 1990, SunGard purchased Warrington Financial Systems Inc. (WFS) of Hopkins (MN) for \$65.3 million.

Warrington provides microcomputer-based portfolio management software products.

- In November 1989, SunGard completed the pooling-of-interests acquisition of DYATRON Corporation of Birmingham (AL), issuing 2.9 million shares of SunGard common stock. DYATRON, with 1988 revenue of \$42.8 million, provides investment support software and processing services to the financial services industry, as well as products and services to the automotive and other industries.
- In June 1989, SunGard purchased Money Management Systems, Inc. (MMS) of Waltham (MA) for approximately \$11 million. MMS markets MoneyMarket II™, a fixed-income securities trading and accounting system for banks and brokers/dealers.
- In March 1989, SunGard issued 271,000 shares of its common stock in a pooling-of-interests with Disaster Control, Inc., a Pennsylvania-based provider of disaster recovery services to Unisys mainframe users.

SunGard's 1990 revenue reached \$262.1 million, a 30% increase over 1989 revenue of \$201.1 million. Net income rose 20%, from \$17.1 million in 1989 to nearly \$20.5 million in 1990. In the three-year summary that follows, certain financials prior to 1990 have been restated to reflect certain business combinations:

**SUNGARD DATA SYSTEMS INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR		
	1990	1989	1988
Revenue	\$262.1	\$201.1	\$164.8
• Percent increase from previous year	30%	22%	N/A
Income before taxes	\$36.6	\$28.3	\$24.5
• Percent increase from previous year	29%	15%	N/A
Net Income	\$20.5	\$17.1	\$15.8
• Percent increase from previous year	20%	8%	N/A
Earnings per share	\$1.34	\$1.22	\$1.13
• Percent increase from previous year	10%	8%	N/A

The acquisitions of WFS and Phase3 during 1990 and the inclusion of MMS for a full year accounted for 75% of the increase in 1990 revenues.

Costs and expenses as a percent of revenue have remained relatively stable for SunGard over the past three years. A chart of costs and expenses as a percentage of revenue for the past three years follows:

**SUNGARD DATA SYSTEMS INC.
THREE-YEAR COSTS AND EXPENSES
(expressed as a percentage of revenue)**

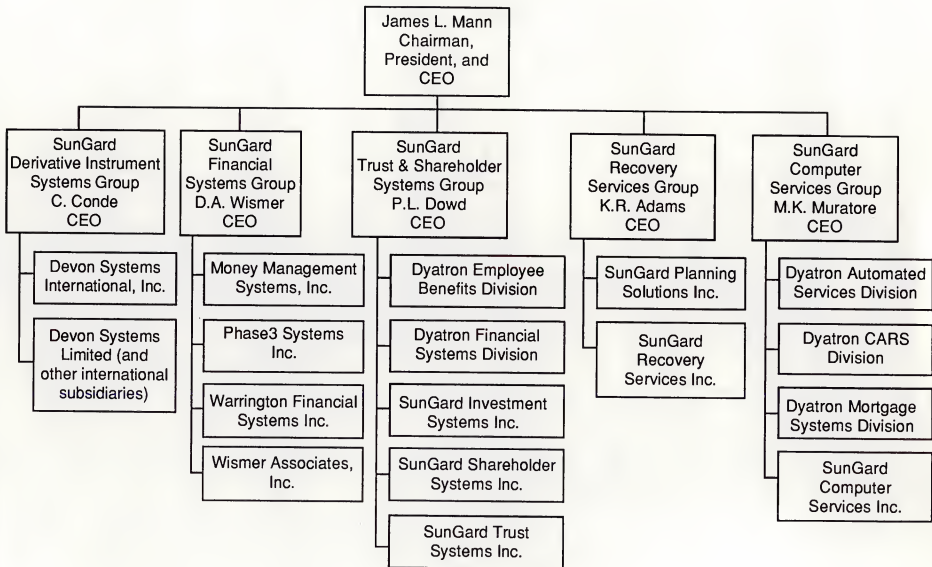
ITEM	FISCAL YEAR		
	1990	1989	1988
• Cost of sales and direct operations	49%	50%	54%
• Sales, marketing, and administration	22%	23%	21%
• Product development	5%	5%	4%
• Depreciation	5%	4%	3%
• Amortization	4%	4%	3%
TOTAL	85%	86%	85%

SunGard's operations are decentralized and its management philosophy is one of "controlled entrepreneurship." Products and services are provided through various separate business units, which during 1990 were organized into five groups as shown in Exhibit A.

- SunGard Derivative Instrument Systems provides trading and accounting processing and application software products for swaps, options, futures, and other derivative instruments for international trading banks.
- SunGard Financial Systems provides portfolio management and securities trading and accounting processing and application software products for financial institutions, brokers/dealers, governments, and corporations.
- SunGard Trust and Shareholder Systems provides trust accounting, employee benefit plan, and investment accounting processing and application software products for financial institutions and corporations, and mutual fund, stock, and bond accounting systems for mutual funds, transfer agents, and corporations.
- SunGard Recovery Services Group provides alternate site backup, testing, and recovery processing services through

EXHIBIT A

SunGard Data Systems Inc.



SunGard Recovery Services Inc. Recovery planning software, consulting, and educational services are provided through SunGard Planning Solutions Inc., which was created in January 1991 by a merger between SunGard's Harris Delvin Associates and EDP Security, Inc. subsidiaries.

- SunGard Computer Services provides remote-access IBM computer processing, direct marketing and automated mailing services, and automotive dealership and mortgage servicing systems.

Key Products and Services

INPUT estimates SunGard's \$235 million in U.S. information services revenue for 1990 was derived approximately as follows:

Processing services	68%
Application software	28%
Turnkey systems	4%
	100%

A three-year summary of source of revenue, as provided by SunGard Data, follows:

SUNGARD DATA SYSTEMS INC. THREE-YEAR SOURCE OF REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR					
	1990		1989		1988	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Investment support systems	\$151.7	58%	\$99.2	49%	\$80.0	49%
Disaster recovery services	74.8	28%	64.7	32%	49.3	30%
Computer services and other	35.6	14%	37.2	19%	35.5	21%
TOTAL	\$262.1	100%	\$201.1	100%	\$164.8	100%

Revenue from investment management systems increased by 53% in 1990 and 24% in 1989. Acquired businesses accounted for 87% of the growth in 1990 and 16% in 1989.

- Revenue from derivative instrument systems (Devon Systems) increased 23% to \$27.8 million during 1990.

Revenue from disaster recovery and related services increased by 16% in 1990 and 31% in 1989, due primarily to net increases in the number of contracts, additional services sold to existing customers, and, to a lesser extent, price increases. SunGard expects that disaster recovery revenues will continue to grow in 1991, but at a lower rate due primarily to continued competition from IBM.

Computer services and other revenues decreased 4% during 1990 and increased 22% during 1989. Revenues for CARS automobile dealer management systems decreased 13% (\$2.1 million) due primarily to decreases in the number of processing customers, lower processing volumes of existing customers, and lower equipment sales. This decrease was partially offset by increased royalties from Electronic Data Systems associated with EDS' purchase of Dyatron's CARS system for IBM System/36 computers in 1986.

Descriptions of SunGard's products and services separated by application area are as follows:

Investment Support Systems:

SunGard delivers its investment support systems primarily as remote processing services using SunGard computer equipment and also through software licenses for use on the customer's own computers.

- The systems support portfolio management and accounting, securities trading and accounting, shareholder accounting, and other investment accounting applications.
- SunGard's investment support system offerings are summarized in Exhibit B.

SunGard provides investment support processing services from its computer centers in Birmingham, Boston (2), Charlotte, Los Angeles, Minneapolis, and Philadelphia.

- As of December 31, 1990, SunGard had approximately 1,140 remote processing contracts in force. These contracts generally have initial terms of from one to three years and then continue for successive one-year renewal terms.

As the result of acquisitions made during 1989 and 1990, SunGard's investment support systems business has increased significantly.

EXHIBIT B

SUNGARD INVESTMENT SUPPORT SYSTEMS

SYSTEM	HARDWARE PLATFORM	MODE OF DELIVERY	PRIMARY MARKETS
Portfolio Management and Accounting			
INVEST ONE	IBM mainframe	Remote processing & software license	International banks, large bank trust departments, mutual funds, and insurance companies
WISMER SERIES 2	Prime IBM mainframe	Remote processing Remote processing & software license	Banks, thrifts, insurance companies, and other financial institutions
MONEYMAX	Prime	Remote processing	State, county, and city government treasury departments
PMS	Micro	Software license	Smaller banks, thrifts, and other financial institutions
Securities Trading and Accounting			
BOLT I & BOLT II	IBM mainframe	Remote processing	Bank capital markets departments, brokers/dealers, and other financial institutions
TRAC	IBM mainframe	Software license & remote processing	Bank capital markets departments and other financial institutions
PHASE3 System	Tandem	Remote processing & software license	Bank capital markets departments, broker/dealers, and other financial institutions
MoneyMarket II	DEC VAX	Remote processing & software license	Bank capital markets departments, brokers/dealers, and other financial institutions
OMNI GS	IBM mainframe	Software license & remote processing	Bank global custody departments and other financial institutions
The Devon System	IBM mainframe DEC VAX Workstation PC	Software license Software license Software license Software license	Trading rooms for derivative and other instruments at international trading banks and other financial institutions

EXHIBIT B
SUNGARD INVESTMENT SUPPORT SYSTEMS

SYSTEM	HARDWARE PLATFORM	MODE OF DELIVERY	PRIMARY MARKETS
Other Investment Accounting			
EMBERS	IBM mainframe	Remote processing & software license	Employee benefit plan investment accounting, record keeping, and reporting for bank, corporate, and other plan managers
OMNIPLAN	IBM mainframe IBM AS/400	Remote processing & software license Software license	Employee benefit plan participant accounting, record keeping, and reporting for bank, corporate, and other plan managers
PLAN ONE	IBM mainframe	Remote processing & software license	Employee benefit plan participant accounting, record keeping, and reporting for bank, corporate, and other plan managers
PERF-4	IBM mainframe	Remote processing & software license	Investment performance analysis and measurement for fund managers
Trust Accounting			
OMNITRUST	IBM mainframe	Software license	Large bank trust departments
AUTOTRUST/AT	IBM mainframe	Remote processing	Medium-size bank trust departments
MICROTRUST	PCs	Software license	Small bank trust departments
Shareholder Accounting			
INVESTAR	IBM mainframe	Remote processing & software license	Large mutual fund managers and transfer agents
SINSTAR	IBM mainframe	Remote processing & software license	Large bank, corporate, and utility stock and bond transfer agents

During 1990, SunGard began consolidating its various investment support systems product and market positions and this effort is expected to continue through 1991.

Disaster Recovery and Related Services:

SunGard Recovery Services Inc.'s recovery services are marketed, directly and through representatives, to users of most DEC, IBM (and compatible), Prime, Stratus, Tandem, Texas Instruments, and Unisys computers in North America. The company's primary target market includes those computer installations containing at least an IBM 3090-200E (or compatible) computer.

Most of the company's disaster recovery customers purchase a basic package of services that includes:

- Use of a hot site for six weeks to recover from any computer center failure
- Use of a cold site for six months if recovery operations must continue for more than six weeks
- Use of a hot site to regularly test disaster recovery procedures
- Use of adjacent office and terminal space during recovery operations and tests
- Technical assistance when conducting recovery operations and tests
- Technical assistance with designing and implementing a backup communications network.

SunGard's MegaCenters[®] are multiple hot site and cold site facilities that customers may use directly or remotely.

- SunGard operates five MegaCenters located in Atlanta, Chicago, Philadelphia, San Diego, and Warminster (PA).
- During 1990, SunGard completed a major expansion of its Philadelphia MegaCenter, doubling its size, and opened the industry's first Tandem Cyclone hot site at this facility. In Chicago, the company installed an IBM 3090-600E and also upgraded the Tandem hot site. Other upgrades were made to the DEC hot site and two IBM hot sites in Philadelphia.
- SunGard also operates two combined cold site and remote operations centers, located in Minnesota and Hawaii. If a

regional disaster were to occur, the company's customers also would have access to a Toronto hotsite operated by STM (SunGard's Canadian representative).

As of December 31, 1990, SunGard had approximately 1,150 disaster recovery contracts in force. These contracts generally require the payment of monthly fees and range in duration from one to five years.

- As of December 31, 1990, the company had capacity for 770 IBM 30XX hotsite contracts.

Through SunGard Planning Solutions Inc., the company provides disaster recovery-related consulting and education professional services and software products.

- Professional consulting services for disaster recovery and business resumption planning include risk analyses; developing, preparing, and updating customized disaster recovery plans and manuals; and auditing customers' disaster recovery procedures and recommending improvements.
- SunGard regularly conducts seminars and industry conferences on disaster recovery and related topics.
- The company also markets DP/90 PLUS™, a microcomputer software package that automates the preparation and maintenance of disaster recovery plans.

Computer Services and Other:

The CARS Division provides processing services, turnkey systems, and associated support services to U.S. automotive dealerships.

- Applications offered include showroom inventory, repair and maintenance administration, parts inventory control, business accounting, payroll, sales/service merchandising, shop scheduling, finance and lease accounting, and dealer/manufacturer communications.
- The CARS System is available from SunGard to clients via distributed processing or as a turnkey system for IBM System/36 and AS/400 computers. System prices range from \$50,000 to \$250,000, including hardware. There are currently over 200 CARS installations worldwide.
- Pad Post Systems provide batch processing for parts inventory control. Transactions are hand-posted on a printout in the

dealership, mailed to SunGard to be entered, and processed at the SunGard data center in Birmingham.

The Automated Services Division provides printing and mailing services, including planning consultation, preparation, printing, and zip code encoding. These services are provided through SunGard's computer centers in Philadelphia and Birmingham.

The Mortgage System Division provides application software and turnkey systems for the management of mortgage loans.

- The Mortgage Servicing System is available as a software product on IBM and compatible mainframes and as a turnkey system on IBM 9370 and Data General ECLIPSE minicomputers.
- Software prices range from \$50,000 to \$100,000. Turnkey systems range from \$200,000 to \$400,000. The current client base includes 45 mortgage servicing lenders.

Industry Markets

INPUT estimates the majority of SunGard's 1990 revenue was derived from the banking and finance industry. The remainder of revenue comes from clients in insurance, manufacturing, distribution, and utilities.

Geographic Markets

Approximately 90% of SunGard's 1990 revenue was derived from the U.S. and 10% from international sources. A three-year summary of geographic source of revenue follows:

SUNGARD DATA SYSTEMS INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
 (\$ millions)

ITEM	FISCAL YEAR					
	1990		1989		1988	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$235.0	90%	\$178.2	89%	\$155.3	94%
International	27.1	10%	22.9	11%	9.5	6%
TOTAL	\$262.1	100%	\$201.1	100%	\$164.8	100%

SunGard divisions and subsidiaries are located as follows:

- | | |
|-------------------------------------|------------------|
| • Devon Systems International, Inc. | New York (NY) |
| • Dyatron Corporation | Birmingham (AL) |
| • Money Management Systems, Inc. | Waltham (MA) |
| • Phase3 Systems Inc. | Waltham (MA) |
| • SunGard Computer Services Inc. | Wayne (PA) |
| • SunGard Investment Systems Inc. | Hinsdale (IL) |
| • SunGard Planning Solutions Inc. | Wayne (PA) |
| • SunGard Recovery Services Inc. | Wayne (PA) |
| • SunGard Shareholder Systems Inc. | San Mateo (CA) |
| • SunGard Trust Systems Inc. | Charlotte (NC) |
| • Warrington Financial Systems Inc. | Hopkins (MN) |
| • Wismer Associates, Inc. | Canoga Park (CA) |

**Computer
Hardware and
Software**

SunGard currently operates MegaCenters in Atlanta, Chicago, Philadelphia, San Diego, and Warminster (PA) in support of its disaster recovery services as follows:

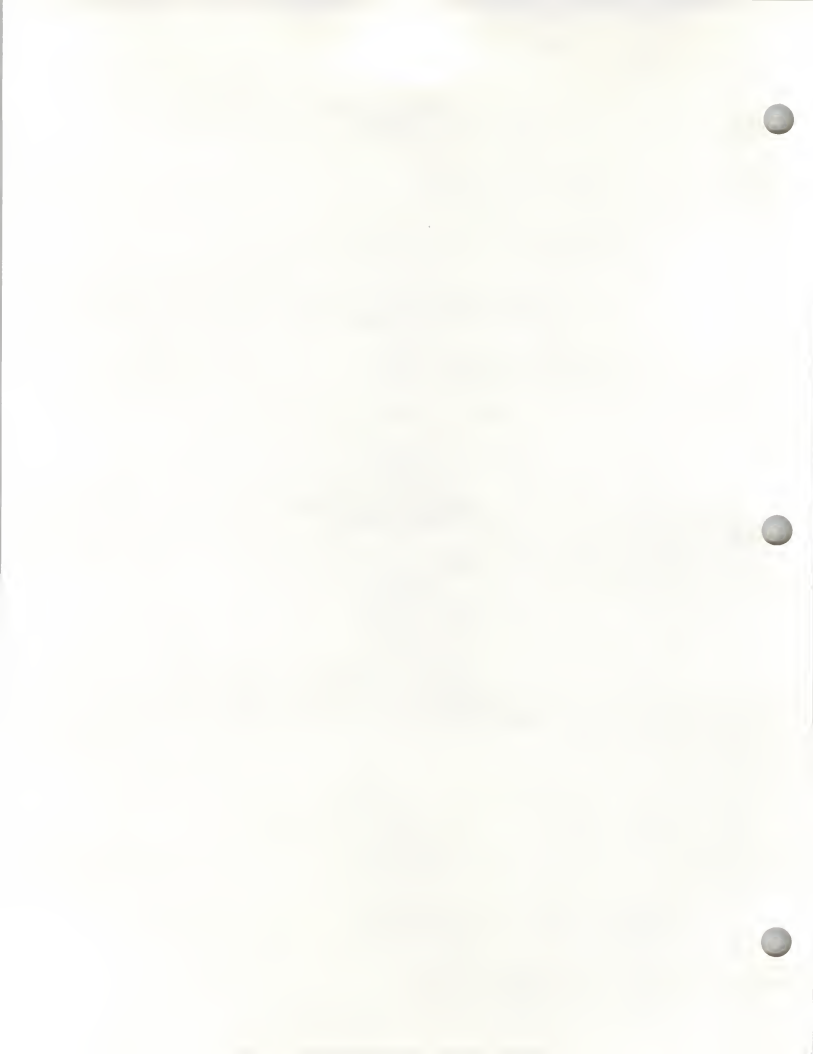
- Philadelphia has five hot sites operating on the following processors:
 - 3 DEC VAXs
 - 2 Tandem mainframes
 - 2 Stratus
 - 1 IBM 3090 600 J
 - 1 IBM 3081 K
 - 1 IBM 3090 600 E
 - 1 IBM AS/400
 - 1 IBM S/36
 - 1 IBM S/38
- Chicago has two hot sites operating on the following processors:
 - 1 Tandem VLX
 - 1 IBM 3090 600 E
 - 1 IBM 3081 K
 - 1 IBM AS/400
 - 1 IBM S/36
 - 1 IBM S/38
- San Diego has one hot site operating on the following processors:
 - 1 IBM 3090 200 E
 - 1 IBM AS/400
 - 1 IBM S/36
 - 1 IBM S/38

- The Atlanta site was acquired with the Disaster Recovery Services business of National Computer Services. Processors installed include:
 - 7 DEC VAXs
 - 1 Prime 6350
 - 1 TI 990/12
- Warminster has eight Unisys computers installed.

Early in 1989, SunGard entered into an agreement with STM Systems Corporation, a major Canadian computer services firm, to provide alternate site disaster recovery services in Canada.

SunGard also has the following computer centers supporting various operations as follows:

- Birmingham has an IBM system installed.
- Canoga Park (CA) has five Prime computers installed in support of investment support systems processing services.
- Charlotte (NC) has one IBM system installed in support of trust accounting processing services.
- Hopkins (MN) has one IBM system installed in support of investment support system processing.
- Philadelphia has three IBM computers installed in support of Computer Services Group operations.
- Waltham (MA) has two centers, one with five Tandem computers installed in support of PHASE3 processing, and one with five DEC computers installed in support of MoneyMarket II processing.



COMPANY PROFILE

SUNGARD DATA SYSTEMS INC.

1285 Drummers Lane
Wayne, PA 19087
(215) 341-8700

James L. Mann, President and CEO
Public Corporation, OTC
Total Employees: 800
Total Revenue, Fiscal Year End
12/31/88: \$121,956,000

The Company

SunGard Data Systems Inc. provides disaster recovery services, primarily to users of IBM, Tandem, DEC and compatible mainframes. The company also provides remote processing services and disaster recovery consulting; and develops, markets, and supports proprietary application software systems for the financial services industry, including shareholder accounting, employee benefit reporting, portfolio management and accounting, trust accounting, and futures and options accounting.

- SunGard was formed from a group of Sun Company, Inc. information processing subsidiaries known as Sun Information Services (SIS). These Sun businesses were sold to certain SIS management personnel and a group of venture capitalists on January 10, 1983.
- SunGard operated as a private company (SunData Corporation) from its founding in 1976 through 1985. In March 1986 the company made an initial public offering of 2,668,000 shares of common stock. Of the shares offered, one million shares were sold by the company and 1.7 million shares were sold by shareholders. Net proceeds to the company of \$10 million were used to repay debt and for general corporate purposes, including working capital and expansion.
- On March 10, 1986, the name of the company was changed from SunData Corporation to SunGard Data Systems Inc.

SunGard's 1988 revenue reached \$122 million, a 34% increase over revenue of \$91.1 million for 1987. Net income increased 37% to \$11.2 million, compared with \$8.2 million in 1987. A five-year financial summary follows:

**SUNGARD DATA SYSTEMS INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per-share data)**

ITEM	FISCAL YEAR				
	1988	1987	1986	1985	1984
Revenue	\$121,956	\$91,118	\$69,053	\$58,586	\$52,768
• Percent Increase from previous year	34%	32%	18%	(a) 11%	(a) 14%
Income (loss) before taxes and extraordinary item	18,473	\$13,876	\$10,436	\$6,570	\$3,397
• Percent Increase from previous year	33%	33%	59%	93%	491%
Net income (loss)	11,224	\$8,215	\$5,490	\$3,812	\$2,787
• Percent Increase from previous year	37%	50%	44%	37%	441%
Earnings (loss) per share	\$1.04	\$0.81	\$0.64	\$0.51	\$(0.19)
• Percent increase from previous year	28%	27%	25%	38%	295%

(a) Includes revenue from service lines sold during 1985.

Total revenue increased \$30.8 million from 1987 to 1988. Of that increase, \$19.6 million or 64% of the increase was new revenue from acquired businesses.

- Revenue from disaster recovery and related services increased \$15.7 million from 1987 to 1988. Of that increase, \$7.9 million was derived from acquired businesses. The remaining \$7.8 million increase in revenue was due primarily to increases in contracts, additional services sold to existing customers, and to a lesser extent, price increases.
- Revenue from investment management systems increased \$15.2 million from 1987 to 1988. Of that increase, \$11.8 million was derived from acquired businesses. The remaining \$3.4 million increase in revenue was due primarily to increased volumes for existing processing customers, offset by a decline in software license revenue from investment and shareholder systems.

Costs and expenses as a percent of revenue have remained relatively stable for SunGard over the past three years. A chart of costs and expenses as a percentage of revenue for the past three years follows:

**SUNGARD DATA SYSTEMS INC.
THREE-YEAR COSTS AND EXPENSES
(expressed as a percentage of revenue)**

ITEM	FISCAL YEAR		
	1988	1987	1986
• Cost of sales and direct operating	54%	56%	55%
• Sales, marketing, and administration	21%	21%	21%
• Product development	2%	2%	4%
• Depreciation and amortization	8%	6%	5%
TOTAL	85%	85%	85%

SunGard's strategy of entering new markets and expansion through acquisition has remained evident into 1989.

- SunGard has recently announced a proposed merger with Dyatron Corp. Dyatron Corp., a Birmingham (AL)-based financial software firm, has projected 1989 revenue of \$50 million.
- SunGard has announced that it plans to complete the acquisition of Money Management Systems, Inc. late in the second quarter of 1989. Money Management Systems, Inc. provides MONEY MARKET II™, a fixed-income securities trading and accounting system for banks and broker/dealers.
- In February 1989, SunGard issued approximately 250,000 shares of its common stock in a pooling-of-interests with Disaster Control, Inc., a Pennsylvania-based provider of disaster recovery services to users of Unisys Corporation's Burroughs mainframe computers.
- In June 1988, SunGard acquired EDP Security, Inc. based in Littleton (MA). EDP specializes in recovery planning for PC and minicomputer-based relational data bases. EDP employs 30 people and has over 1,600 clients worldwide.
- In December 1987, the company acquired Minneapolis-based Eloigne Corporation, a provider of disaster recovery services with a customer base of 50.

- In December 1987, SunGard made its biggest acquisition to date with its purchase of Devon Systems International, Inc. for \$20 million plus future contingent payments. Devon Systems provides software to large domestic and international banks for trading currency and interest rate options, futures, and swaps. SunGard estimates the potential market for these products at some 1,500 institutional trading rooms worldwide.
- Also in December 1987, SunGard purchased Uni-Coll Corporation, a Philadelphia computer service bureau, to add to SunGard's remote processing services.
- In June 1987, SunGard acquired Devlin Associates, a nationally recognized disaster planning firm. SunGard immediately merged HSH National and Devlin into one operating subsidiary called Harris Devlin Associates, Inc.

Early in 1989 SunGard entered into an agreement with STM Systems Corporation, a major Canadian computer services firm, to provide alternate site disaster recovery services in Canada.

SunGard is currently organized into nine operating groups as follows:

Disaster Recovery and Related Services:

- SunGard Recovery Services of Wayne (PA) offers disaster backup and recovery services for large-scale computer centers. The current CEO is Richard B. Aldridge.
- Harris Devlin Associates, Inc., located in Dublin (OH), is a provider of consulting and education for disaster planning.
- SunGard Computer Services, which shares office space with SunGard Recovery Services, is a provider of remote access IBM processing services for software developers. The current president is Michael K. Muratore.
- SunGard Central Computer Facility, located in Philadelphia, is a provider of remote processing services for customers of SunGard Computer Services, SunGard Shareholder Systems, and SunGard Investment Systems.
- EDP Security, Inc., based in Littleton (MA), offers a PC software product for disaster recovery planning.
- Disaster Control, Inc. is a supplier of disaster recovery services for Unisys Corporation's Burroughs mainframe computers.

Investment Management Systems:

- SunGard Shareholder Systems Inc., located in San Mateo (CA), is a developer and processor of shareholder accounting systems for mutual funds, banks, and corporations. The current CEO is Dr. Phillip V. Manning.
- SunGard Investment Systems Inc., located in Hinsdale (IL), is a developer and processor of investment accounting systems for pension and benefit plans. The current president is Phillip L. Dowd.
- Wismer Associates, Inc., located in Canoga Park (CA), provides on-line portfolio management services for savings and loan associations, corporations, and governments. The current president is Dr. David A. Wismer.
- SunGard Trust Systems Inc., located in Charlotte (NC), is a provider of trust accounting and related services to banks. The current president is Robert F. Clarke.
- Devon Systems International, Inc., located in New York (NY), is a provider of integrated trading and accounting systems for derivative instruments to international money center banks. The current president is Gregory S. Bentley.

SunGard's main competitor in the disaster recovery area is Comdisco. The company also competes with numerous regional disaster recovery centers, but says these companies cannot compete on a national level and does not consider them a threat.

- IBM recently made an entry into the disaster recovery market, but neither industry analysts nor SunGard management see this as a threat.

Key Products and Services

A three-year summary of source of revenue, as provided by SunGard Data, follows:

**SUNGARD DATA SYSTEMS INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1988		1987		1986	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Disaster recovery and related services	\$61.0	50%	\$44.6	49%	\$34.5	50%
Financial processing services and software	61.0	50%	46.5	51%	34.6	50%
Total	\$122.0	100%	\$91.1	100%	\$69.1	100%

Revenue from disaster recovery and related services increased by 27% in 1988 and 31% in 1987 due to acquired businesses, net increases in contracts, additional services sold to existing customers, and, to a lesser extent, price increases. Acquired businesses accounted for 50% of the disaster recovery growth in 1988, and 12% in 1987.

Revenue from investment management systems increased by 24% in 1988 and 33% in 1987. Acquired businesses accounted for 78% of the growth in 1988 and 18% in 1987. The increase in revenue for investment management systems is primarily attributable to acquired businesses. Additional increase in revenue was derived from increased volumes for existing processing customers.

Descriptions of SunGard's products and services separated by operating group are as follows:

Disaster Recovery and Related Services:

- SunGard Recovery Services
 - In 1987, SunGard claimed to have a 57% market share of disaster recovery services in the IBM 30XX market and only a 4% market share of the IBM 43XX market, whereas Comdisco, its main competitor, had a 37% and 58% share in the respective markets. The average annual fees derived from a disaster recovery contract for the 30XX and the 43XX processors are \$75,000 and \$24,000, respectively.

- The company currently has approximately 800 contracts serving over 300 customers located in 35 states and Canada.
- The average contract for SunGard generates \$80,000 annually and increases at a rate of approximately 10% per year to accommodate client growth. Contracts are generally long-term (1 to 5 years). Eighty-five percent of the contracts are renewed.
- SunGard operates six data centers in Philadelphia, Chicago, and San Diego.
- In the event of a disaster, SunGard charges the customer a "notification fee" of between \$25,000 and \$50,000 to configure a system similar or identical to that of the customer and begin use of the data processing center; the customer is also charged on the basis of computer usage. The customer has available use of a "hot site" with a processor configuration similar or identical to his own. Should the customer require an extended stay (over six weeks), a "cold site" is available where computers may easily be installed and used by the customer.
- Customers may access SunGard's processors for testing their backup procedures and for actual processing in the event of a disaster via System Network Access Points (SNAP), telecommunications centers strategically placed throughout the U.S.
- In December 1986, SunGard had its first customer disaster. Putnam Companies had a fire in their data processing center and requested SunGard's aid. The backup and recovery was successful and received favorable press in a number of publications. In 1987, four more of SunGard's customers suffered from disasters. To date SunGard has successfully aided in six disaster recoveries.
- In 1983 the Comptroller of Currency mandated that national and large commercial banks should maintain a feasible recovery plan in the event of a disaster, which led to an increase in contracts in the banking industry. Other clients include many of the largest Fortune 500 and Fortune 500 service companies.
- Harris Devlin Associates, Inc.
 - Harris Devlin provides disaster recovery consulting and updating services.

- SunGard Computer Services.
 - This operating group is responsible for leasing excess computer time at SunGard's data centers to software developers, and for providing list enhancement services.
- SunGard Central Computer Facility.
 - This group is responsible for specialized remote processing problems for customers of SunGard Computer Services, SunGard Shareholder Systems, and SunGard Investment Systems.
- EDP Security, Inc.
 - EDP Security, Inc. offers the DP/80 software product which guides users through risk analysis and aids them in developing a custom disaster recovery plan. Implementation and training is included with the package, and consulting is available to aid customers who have unique problems.
- Disaster Control, Inc.
 - Disaster Control, Inc. claims to be the largest supplier of disaster recovery services for Unisys Corporation's Burroughs mainframe computers.

Investment Management Systems:

- SunGard Shareholder Systems Inc.
 - Formerly Applied Financial Systems, SunGard Shareholder Systems offers two main products for shareholder accounting. Both products are available for in-house installation, or may be accessed through SunGard's remote data centers.
 - INVESTAR™ is a shareholder accounting system that supports the following funds: money market funds, tax free funds, equity or bond funds, series type funds, institutional funds with 12B-1 features, unit investment funds, and closed-end funds. Some of the important features of INVESTAR include: automated Letter of Intent and Rights of Accumulation accounting; on-line inquiry for response to shareholder questions; prospect tracking and customer retention analysis; daily and periodic management reporting; performance statistics regarding transaction processing; interface to

debit/credit card networks and services; year-end tax reporting; real-time inquiry reporting on all customer account information; periodic processing of fund-triggered activities; and interfaces to automated clearing houses, Fed Wire and Bank Wire, and automated teller machines. INVESTAR runs on IBM 434X, 303X, 308X, and compatible mainframes under MVS using IMS DB/DC and COBOL.

- SUNSTAR™ is an on-line shareholder accounting system that performs reporting and recordkeeping functions for stock and bond issues based on a common investor data base. SUNSTAR runs on IBM 434X, 303X, 308X, and compatible mainframes under MVS using IMS DB/DC and COBOL.
- SunGard Investment Systems Inc.
 - The Employee Benefit Reporting System (EMBERS®) is a family of individual systems that shares a common data base and file-building technique. When licensed as a software package, the EMBERS family sells for approximately \$150,000. There are currently 20 installations. Components of EMBERS are:
 - EMBERS/FSR (Financial Statement Reporting) produces accounting and investment performance reports, including consolidated reports for master trusts.
 - EMBERS/PAR (Plan Allocation Reporting) provides plan allocation schedules for items such as trade dating, income accrual, and multiple fund/plan relationships.
 - EMBERS/CFR (Collective Fund Reporting) is a support system that will maintain collective fund portfolios and provide unit valuations.
 - EMBERS/IPM (Investment Performance Measurement) is a comprehensive performance measurement system that includes trade date performance and income accruals for trust portfolios.
 - EMBERS/INC (Income Review and Reconciliation) provides distribution of interest and dividend income to trust clients. It computes asset positions of record and amount of income expected, then matches them against income posted, providing an audit trail for further research if needed.

- FUND ONE^R is an on-line portfolio accounting system that tracks investment transactions for bank commingled funds, such as sales and purchases of investments, commission payments, and dividend, interest, and capital gain distributions. FUND ONE licenses for approximately \$100,000 and runs on IBM and compatible mainframes under OS/MFT, OS/MVT, OS/VS1 and DOS/VS, SVS, MVS, or VM and uses CICS as the teleprocessing monitor. FUND ONE has 25 installations to date. FUND ONE is also available as a remote processing service.
- PERF 4TM is a fourth-generation performance measurement system that measures the rate of return achieved by an investment manager and other pertinent investment performance information. PERF 4 licenses for about \$120,000 and has 20 in-house installations. PERF 4 runs on IBM 43XX series mainframes and targets the IBM PC for downloading of data.
- PLAN ONE is an employee benefit participant accounting system that will track the individual employees' accounts in any defined contribution plan. PLAN ONE licenses for \$350,000 and runs on IBM and compatible mainframes. There are currently six installations of PLAN ONE.
- MUTUAL FUND ONE is an on-line, real-time mutual fund portfolio accounting system with integrated general ledger functions. MUTUAL FUND ONE is available as a remote processing service or as an in-house software package. The package runs on IBM 30XX, 4300 series and compatible processors under MVS, VM, XA, and uses CICS as the teleprocessing monitor. The remote service is designed to communicate with IBM 3270 or equivalent terminals. The software package licenses for \$200,000. There are currently 12 installations.
- Wismer Associates, Inc.
 - SERIES 2TM is a portfolio management processing service designed for financial institutions.
 - MONEYMAX^R is a portfolio management processing service designed for the public sector.
- SunGard Trust Systems Inc.
 - AUTO-TRUST/AT, is a remote batch personal trust accounting system. The service is accessed via IBM

terminals installed at trust departments. Features of AUTO-TRUST include: complete common trust fund accounting, pricing for all listed stocks and corporate and municipal bonds, automatic posting of security purchases to suspend accounts for payment versus delivery, collateral requirements reporting, complete tax lot accounting, federal and state tax ledgers, regulatory reports for FDIC and the Comptroller of Currency, and money market fund investments.

- Autofax/PR, is a processing service that provides accounting and participant record-keeping functions for the following types of employee benefit plans: profit sharing, money purchase pension, HR10 (single or master), ESOPS, TRASOPS, multiple investment, integrated plans, and thrift plans.
- AutoTrans is a remote batch-processing service that provides control of shareholder/bondholder recordkeeping. A full listing of shareholders/bondholders, including certificate numbers and number of shares or face value held, can be maintained. As transfers take place, old certificates are cancelled and new certificates issued.
- AutoPay is a remote batch service that provides trust departments with complete production capability for periodic and nonperiodic payments from savings plans, pension or profit sharing plans, and annuities. Included in the system are up to eight withholding elections, choice of remittance types, complete file maintenance capability, and alternate addresses, as well as a variety of payment options.
- AutoSave is an IRA, CD, and savings record keeping and reporting system designed for IBM Series 36 computers.
- Microtrust is a PC-based, on-line, real-time, menu-driven software package for trust accounting. Features of the system include applications for administrative functions, investment, and tax accounting. Microtrust software is priced at \$6,000.
- MicroTrans is a software package for stock and bond recordkeeping and transfer applications.
- Autofax/MPR is a standalone participant reporting system for employee benefits administration.

- Devon Systems International, Inc.
 - EMS Base Module is the system core of the Exposure Management System. It incorporates processing capabilities for exchange-traded options and futures, a report writer, and a daily general ledger.
 - EMS/OPT is an options pricing toolkit providing multiple analysis models to manage exposure in the currency and commodities options markets. EMS/OPT also has the ability to access historical price and volatility data bases to be used directly in the analysis.
 - EMS/IRP, or Interest Rate Protection Tools, provides pricing and management analysis support for managing exposures to money market rates.
 - EMS/FxP, or Foreign Exchange Trading Supplement, particularizes EMS to foreign exchange business by providing multi-currency capabilities and pricing, and back-office and accounting support specific to the foreign exchange market. EMS/FxP allows general ledger entries to be passed for interbank trades on either a single, dual or multi-currency basis, and maintains a comprehensive library of credit line formulas. EMS/FxP produces confirmations of trades using user-defined texts in English, German or French.
 - EMS/UA, or the User Authorization Module, provides an audit trail of transactions processed and allows managers to limit access to the system.
 - EMS/DF, or the Hedge Accounting Module, allows EMS to maintain records of deferred gains and losses, and to evaluate the effectiveness of hedges through a summary comparison.
 - EMS/FCM, or the Brokerage Module, supports the back-office, customer reporting and accounting processing requirements of brokerage activities. EMS features same-day generation of confirmations and statements, as well as real-time "equity watch" functions which monitor the client's position, margin and equity standing. Clients wishing to be placed on "explicit only" liquidation status can be designated as such.

- The EMS system runs on the following processors: IBM 43XX, 308X, 303X under VM/CMS or MVS/TSO; MicroVAX 3XXX or larger under VMS; IBM PS/2 Model 80-111 with Quarterdeck QEMM/386; and Compaq 386/20.

Industry Markets

Approximately 70% of SunGard's 1988 revenue was derived from the banking and finance industry. The remainder of revenue comes from clients in insurance, manufacturing, distribution, and utilities.

Geographic Markets

INPUT estimates that approximately 95% of SunGard's 1988 revenue was derived from the U.S. and 5% from Canada.

SunGard divisions and subsidiaries are located as follows:

- | | |
|-------------------------------------|------------------|
| • SunGard Recovery Services | Wayne, PA |
| • Harris Devlin Associates, Inc. | Dublin, OH |
| • Disaster Control, Inc. | PA |
| • EDP Security, Inc. | Littleton, MA |
| • SunGard Computer Services | Wayne, PA |
| • SunGard Central Computer Facility | Philadelphia, PA |
| • SunGard Investment Systems Inc. | Hinsdale, IL |
| • SunGard Shareholder Systems Inc. | San Mateo, CA |
| • SunGard Trust Systems Inc. | Charlotte, NC |
| • Devon Systems International, Inc. | New York, NY |
| • Wismer Associates, Inc. | Canoga Park, CA |

Computer Hardware and Software

SunGard currently operates data centers in Philadelphia, Chicago, and San Diego, consisting of six hot sites and five cold sites, as follows:

- Philadelphia has three hot sites and two cold sites operating on the following processors:

- 1 DEC VAX 8800
 - 1 Tandem PXP
 - 1 IBM 3090 400 E
 - 1 IBM 3081 GX
 - 1 IBM 3090 200 E
-
- Chicago has two hot sites and two cold sites operating on the following processors:
 - 1 Tandem VLX
 - 1 IBM 3090 200 E
 - 1 IBM 3081 G
 - 1 IBM 3090 400 E
-
- San Diego has one hot site and one cold site operating on the following processors:
 - 1 IBM 3081 K
 - 1 IBM 3090 200 E

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

April 1996

SunGard Data Systems Inc.

Chairman & CEO: James L. Mann
1285 Drummers Lane
Wayne, PA 19087
Phone: (610) 341-8700
Fax: (610) 341-8739

Status:	Public
Employees:	2,900 (12/95)
Revenue:	\$532,628,000
Fiscal Year End:	12/31/95

Key Points

- SunGard Data Systems Inc. is a computer services and software company that specializes in proprietary investment support systems, comprehensive computer disaster recovery services, and proprietary health care information systems.
- In 1995, SunGard established its new Healthcare Information Systems Group through the acquisition of two providers of work-flow management and document-imaging systems to the health care industry—Intelus Corporation, acquired in

August 1995, and MACESS Corporation, acquired in October 1995.

- In 1995, the company made nine additional acquisitions, described in the Acquisitions section, and another that was completed after the year end. These acquisitions provided additions to four of the five existing groups in 1995.

Company Description

SunGard Data Systems Inc. provides a family of proprietary investment support systems for the financial services industry via remote processing and software licenses. The company also provides disaster recovery and associated consulting services, utility processing, direct marketing, and various printing services, as well as its new line in information-management systems for health care organizations.

The company's stock had a two-for-one split in July 1995.

Organization and Structure

SunGard's operations are decentralized and its management philosophy is one of "controlled entrepreneurship." The company's services are provided through separate business units, which are organized into groups of related businesses.

Each business is directed by its own management team and has its own sales, marketing, product development, operations, and customer support personnel. Overall corporate control and coordination are achieved through centralized budgeting, financial and legal reporting, cash management, and strategic planning.

SunGard's key executives are listed below:

Name	Title
Kenneth R. Adams	CEO, Healthcare Information Systems Grp
Bruce H. Battjer	CEO, Computer Services Grp
Cristobal I. Conde	CEO, Trading Systems Grp
Philip L. Dowd	CEO, Trust and Shareholder Systems Grp
Michael F. Mulholland	CEO, Recovery Services Grp
Michael K. Muratore	CEO, Financial Systems Grp

The business units are organized into six groups, as follows:

Investment Support Systems

- SunGard Financial Systems Group—Provides portfolio management, securities trading, and accounting systems for financial institutions, broker/dealers, insurance companies, governments, and corporations.

Subsidiaries/business units within this group include:

- SunGard Brokerage Systems
- SunGard Global Systems
- SunGard Government Systems
- SunGard Insurance Systems
- SunGard Securities Systems
- SunGard Trading Systems Group—Formerly known as the SunGard Capital Markets Group, this unit provides trading, risk management, and accounting systems for derivative instruments, securities, and foreign exchange for international financial institutions, brokerage firms, and corporations. Subsidiaries/business units within this group include:
 - Front Capital Systems
 - Prosoftia
 - Renaissance Software
 - SunGard Capital Markets
 - SunGard Futures Systems
- SunGard Trust and Shareholder Systems Group—Provides trust and investment accounting, portfolio management and administration, securities trading, custody, and employee benefit plan systems for financial institutions, stockbrokers, and corporations; mutual fund, stock and bond accounting systems for mutual funds, transfer agents, and corporations; and accounting systems for nonprofit organizations. Subsidiaries/business units within this group include:
 - All Solutions
 - Bi-Tech Software
 - Portfolio Administration Limited
 - Shaw Data Services
 - SunGard Asset Management Systems
 - SunGard/DML
 - SunGard Employee Benefit Systems

- SunGard Investment Systems
- SunGard Shareholder Systems
- SunGard Trust Systems
- Worrall Miller & Associates

Disaster Recovery Services

- SunGard Recovery Services Group—Provides comprehensive business recovery services for mainframe and midrange computer platforms; workgroup, mobile, and quick-ship recovery services; recovery planning software, and related consulting and educational services. Subsidiaries/business units within this group include:

- SunGard Planning Solutions
- SunGard Recovery Services

Computer Services and Other

- SunGard Computer Services Group—Provides remote-access computer processing and outsourcing, and automated mailing services. Subsidiaries/business units within this group include:

- SunGard Computer Services
- SunGard Mailing Services

- SunGard Healthcare Information Systems Group—Provides work-flow management and document-imaging systems for health care and financial institutions. Subsidiaries/business units within this group include:

- Intelus Corporation
- MACESS Corporation

Company Strategy

SunGard's business approach is to focus on markets in which it has opportunities to develop or acquire leading products and advantageous market positions.

The company seeks to grow through internal development, the acquisition of businesses that broaden or complement its existing product lines, and more recently, the acquisition of businesses with new product and business lines. Since its initial public offering in 1986, the company has acquired twenty-one investment support systems businesses, fourteen disaster recovery businesses, two computer services businesses, and two health care information systems businesses.

Continual software upgrading and enhancement is central to SunGard's technology strategy, which is to use the established functionality of existing systems to develop state-of-the-art systems for new technological environments.

During 1996, SunGard plans to upgrade existing products, and develop several new products in each of the company's groups.

Financials

SunGard's 1995 revenue reached \$532.6 million, a 22% increase over 1994 revenue of \$437.2 million. Net income rose 13% over \$43.1 million in 1994, to \$48.7 million in 1995.

Excluding acquired businesses, revenue increased 15% (\$62.6 million) in 1995, and 10% (\$36.6 million) in 1994.

A five-year financial summary is shown on the following page.

Product development expenses were approximately \$47.9 million (9% of revenue) in 1995, \$35.0 million (8% of revenue) in 1994, and \$34.3 million (9% of revenue) in 1993.

SunGard expects total revenue to increase in 1996, although at a lower rate than in 1995, primarily due to the following:

- An expected increase in software license revenue
- Continued growth in disaster recovery service revenue, especially from midrange platforms
- A full year of operations from acquired businesses

**SunGard Data Systems Inc.
Five-Year Financial Summary
(\$ Millions, except per-share data)**

Item	Fiscal Year				
	1995	1994	1993	1992	1991
Revenue	\$532.6	\$437.2	\$381.4	\$324.6	\$283.6
• Percent change from previous year	22%	15%	15%	14%	8%
Income before taxes	\$85.1	\$72.5	\$63.2	\$45.5	\$38.3
• Percent change from previous year	17%	15%	39%	18%	5%
Net income	\$48.7	\$43.1	\$38.5	\$25.8	\$21.5
• Percent change from previous year	13%	12%	49%	20%	5%
Earnings per share (a)	\$1.23	\$1.12	\$1.04	\$0.79	\$0.68
• Percent change from previous year	10%	8%	32%	17%	1%

(a) Restated to reflect the company's two-for-one stock split in July 1995.

Costs and expenses as a percent of revenue have remained relatively stable for SunGard over the past three years. A chart of costs and

expenses as a percentage of revenue for the past three years follows:

**SunGard Data Systems Inc.
Three-Year Costs and Expenses
(expressed as a percentage of revenue)**

Item	Fiscal Year		
	1995	1994	1993
Cost of sales and direct operations	44%	45%	46%
Sales, marketing, and administration	21%	20%	20%
Product development	9%	8%	9%
Depreciation	6%	6%	5%
Amortization	4%	5%	4%
Merger costs	1%	---	---
Total	85%	84%	84%

Revenue Analysis by Product/Service

INPUT estimates that SunGard's \$438 million in U.S. information services revenue for 1995 was derived approximately as follows:

Processing services	73%
Applications software	21%
Professional services	5%
Systems operations.....	1%
	100%

A three-year source of revenue and operating income summary, as provided by SunGard Data Systems, follows:

**SunGard Data Systems Inc.
Three-Year Financial Summary
(\$ Millions)**

	Fiscal Year					
	1995		1994		1993	
Item	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Revenue						
- Investment support systems	\$330.6	62%	\$271.1	62%	\$243.0	64%
- Disaster recovery services	162.3	31%	138.7	32%	113.2	30%
- Computer services and Other	39.7	7%	27.4	6%	25.2	6%
Total	\$532.6	100%	\$437.2	100%	\$381.4	100%
Operating income						
- Investment support systems	\$51.7	65%	\$43.9	62%	\$38.5	65%
- Disaster recovery services	34.9	43%	29.2	42%	25.0	42%
- Computer services and Other	5.1	6%	4.8	7%	3.2	5%
- Corporate administration	(7.4)	(9%)	(7.6)	(11%)	(7.1)	(12%)
- Merger costs	(4.2)	(5%)	---	---	---	---
Total	\$80.1	100%	\$70.3	100%	\$59.6	100%

Investment support systems (ISS) revenue increased 22% (\$59.5 million) during 1995 and 12% (\$28.1 million) during 1994.

- Excluding acquired businesses, ISS revenue increased 15% (\$39.7 million) in 1995 and 8% (\$18.3 million) in 1994.

- The 1995 increase was due to a 37% increase in software license and professional services revenue and an 8% increase in remote processing and software maintenance revenue.

Disaster recovery services (DRS) revenue increased 17% (\$23.6 million) in 1995 and 23% (\$25.5 million) in 1994.

- Excluding acquired businesses, DRS revenue increased 15% in 1995 and 14% in 1994.
- The \$18.7 million revenue increase in 1995 is primarily due to new contract signings and contract renewals, a significant portion of which were in midrange platforms, and a \$1.6 million increase in software license and professional services revenue.

Computer services and other (CSO) revenue increased 45% (\$12.3 million) in 1995 and 9% (\$2.2 million) in 1994.

- Excluding acquired businesses, CSO revenue increased 9% in 1995, and in 1994, excluding revenue attributable to a divested product line, revenue increased 14%.
- The 1995 revenue increase is due to volume growth in the remote-access computer services business, and increases in the company's mailing services business.

Recurring revenues derived from remote processing services, disaster recovery services, and software maintenance services were approximately \$425.6 million, \$367.3 million, and \$321.0 million in 1995, 1994, and 1993, respectively.

- The decline in percent of recurring revenue during 1995, compared to 1994 and 1993, is attributed to an increase in percent of software license revenue, which rose to 12% of total revenue in 1995, from 8% in 1994.
- This increase in percent of software license revenue was due primarily to strong growth in both the Trading Systems Group's products and acquired businesses.

Interim Results

Revenue for the three-month period ending March 31, 1996 reached \$149.8 million, a 23% increase over \$121.5 million for the same period in 1995. Net income was \$14.6 million, an increase of 32% over \$11.1 million for the same period a year ago.

- Investment support systems revenue grew to \$92.7 million during the quarter, an increase of 20% over the same period in 1995.
- Disaster recovery services revenue increased 17% year to year, to \$43.5 million during the period.
- Computer services and other revenue increased to \$13.6 million, an increase of 85% over the same period the prior year.

Market Financials

INPUT estimates that the majority of SunGard's revenue is derived from the banking and finance industry. The remainder is derived from clients primarily in the insurance, health care, manufacturing, distribution, and utilities industries, and state and local government.

- SunGard's investment support systems (ISS) are provided primarily to the financial services industry, including domestic and international banks, and other financial institutions, brokers/dealers, mutual funds and transfer agents, insurance companies, investment advisors, retirement plan managers, and other portfolio managers. Other clients include governments and large corporations.
- Disaster recovery services are provided primarily to users of IBM and compatible mainframes, and Digital, Hewlett-Packard,

IBM midrange, Prime, Stratus, Tandem, Texas Instruments, and Unisys computers.

Geographic Markets

Approximately 82% of SunGard's 1995 revenue was derived from the U.S. and 18%

from international sources. A three-year geographic source of revenue summary follows:

SunGard Data Systems Inc.
Three-Year Geographic Source of Revenue Summary
 (\$ Millions)

	Fiscal Year					
	1995		1994		1993	
Geographic Market	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$437.7	82%	\$377.0	86%	\$333.9	88%
International	94.9	18%	60.2	14%	47.5	12%
Total	\$532.6	100%	\$437.2	100%	\$381.4	100%

Acquisitions

In January 1996, SunGard acquired Worrall Miller & Associated Pty. Ltd., an Australia-based provider of pension plan administration software, which expands the international operations of the Trust and Shareholder Systems Group, especially in the Pacific Rim.

During 1995, SunGard spent approximately \$24 million in cash, net of cash acquired, to acquire four investment support systems businesses and two disaster recovery services businesses. The company also issued a total of 4,253,000 shares of its common stock to acquire one investment support systems business and two health care information systems businesses in transactions that were accounted for as poolings of interest.

- In December 1995, SunGard acquired the disaster recovery business of the Newtrend Division of Electronic Data Systems

Corporation, which consists primarily of recovery services for users of Unisys and Unisys-compatible mainframe computers. This acquisition has expanded the customer base of the company's Unisys disaster recovery platform.

- In November 1995, the company acquired Renaissance Software, Inc., a Los Altos (CA)-based provider of trading, risk management, and accounting systems to large banks and other market-makers that trade over-the-counter interest rate derivatives. This purchase enhances SunGard's ability to market risk management and derivative trading software systems to the very largest financial and "buy-side" institutions.
- All Solutions Financial Systems, a provider of fund and asset administration systems in Australia and New Zealand, was acquired in

September 1995, also contributing to the expansion of the Trust and Shareholder Systems Group.

- MACESS Corporation, a provider of work-flow management and document-imaging systems to the health care industry, was acquired in October 1995. This acquisition, along with the acquisition of Intelus Corporation, was made to form SunGard's new Healthcare Information Systems Group.
- In August 1995, the Financial Systems Group acquired Market Investment Solutions, Inc. (MIS), a Colorado-based provider of microcomputer investment management, accounting, and reporting systems for the insurance industry. This acquisition complements the large mainframe-based systems that SunGard provides to this market.
- In August 1995, SunGard acquired Intelus Corporation, also a provider of work-flow management and document-imaging systems to the health care industry. This purchase provided a portion of the foundation for SunGard's new Healthcare Information Systems Group.
- In July 1995, the company purchased Bi-Tech Software, Inc., a California-based provider of accounting systems to nonprofit organizations. This business was also folded into the operations of the company's investment support systems business.
- The Recovery Services Group, the disaster recovery software business of ChiCor Information Management, Inc., was acquired in March 1995, significantly expanding the customer base of SunGard's disaster recovery business.

- In February 1995, DML, a New York-based provider of securities lending and brokerage accounting software systems, was acquired and incorporated into SunGard's Trust and Shareholder Systems Group.

Employees

As of December 31, 1995, SunGard had approximately 2,900 full-time employees.

Currently, the company has approximately 3,000 employees.

Key Products and Services—Investment Support Systems

SunGard designs, markets, and maintains a comprehensive family of proprietary investment support systems for the financial services industry.

The investment support systems are delivered primarily as remote processing services using SunGard computer equipment, and also through software licenses for use on the customer's own computers.

- The systems automate the complex accounting calculations, record keeping, and reporting associated with investment operations.
- During 1995, the company continued product unification efforts to provide customers with access to multiple systems and data through common graphical interfaces and shared databases.
- Some of the company's mainframe computer systems were converted to client/server technology during 1995.

Investment Accounting and Portfolio Management Systems

SunGard's investment accounting and portfolio management systems maintain the books of record for all types of large

investment portfolios, such as those managed by banks, mutual funds, employee retirement plans, and insurance companies.

Principal investment accounting and portfolio management systems are summarized in the following table.

Investment Accounting and Portfolio Management Systems

System	Platform	Mode of Delivery	Primary Markets
INVEST ONE®	IBM mainframe	Remote processing service and software license	International banks, large bank trust departments, mutual funds, insurance companies, and other financial institutions
	UNIX workstation	Software license	
ON-LINE™	Bull mainframe	Remote processing service	Institutional and retail investment advisers and other portfolio managers
ON-SITE™	UNIX workstation	Software license	Institutional and retail investment advisers and other portfolio managers
ON-CORE™	Microcomputer	Software license	Institutional and retail investment advisers and other portfolio managers
MONEYMAX®/ SERIES 2™	UNIX workstation	Remote processing service	Government treasurers and financial institutions
PAL™	IBM midrange	Remote processing service	United Kingdom stockbrokerage firms and fund managers
PMS™/APS™	Microcomputer	Software license	Small banks, thrifts, and other financial institutions
PAR EX®	Microcomputer	Software license and remote processing service	Insurance companies
PRISM™	IBM mainframe	Software license	Insurance companies
SDIM™	Microcomputer	Software license	Insurance companies
SERIES 1™	Microcomputer	Software license	Insurance companies

- In August 1995, SunGard expanded its investment accounting systems product line for insurance companies with the addition of the PAR EX and SDIM products, acquired through the purchase of Market Investment Solutions, Inc.
- SunGard also provides general ledger accounting systems to insurance companies and nonprofit organizations. These products include ABC™ (Accounting Budget and Cost System), CDS™ (Cash Disbursement System), and EAS™ (Enterprise Accounting System) for insurance companies, and IFAS™ (Interactive Fund Accounting System) for educational institutions, state

and local governments, and other nonprofit organizations. These products were acquired with the purchase of Bi-Tech Software, Inc. in July 1995.

Securities Trading and Accounting Systems

SunGard's securities trading and accounting systems perform investment accounting functions as well as maintaining inventories, processing trade activities, and monitoring compliance with government regulations and limits. These systems are used primarily by the "sell side" of the investment business.

Principal software products in this category are summarized in the following table.

**Securities Trading
and Accounting Systems**

System	Platform	Mode of Delivery	Primary Markets
BOLT I™, BOLT 2™	IBM mainframe	Remote processing	Domestic bank capital markets departments, brokers/dealers, and other financial institutions
GSM Global Securities Manager®	Digital VAX, UNIX workstation	Software license	Domestic bank capital markets departments, brokers/dealers and other financial institutions
INTRADER®	UNIX workstation	Software license	Domestic bank capital markets departments, brokers/dealers and other financial institutions
MONEYMARKET II®	Digital VAX	Remote processing service and software license	Domestic bank capital markets departments, brokers/dealers and other financial institutions
OMNI SA™	IBM mainframe IBM AS/400 IBM RS/6000	Remote processing service and software license	Domestic bank capital markets departments, brokers/dealers and other financial institutions
PHASE3®	Tandem	Remote processing service and software license	Domestic bank capital markets departments, brokers/dealers and other financial institutions

During 1995, SunGard introduced the SUNGARD SOLUTIONS NETWORK™, which, through strategic alliances, provides customers with third-party services such as securities descriptions, pricing, analytics, and clearing.

Trust, Global Custody and Securities Lending Systems

The company's trust systems automate the investment operations unique to the bank

trust business. Global custody systems automate the functions associated with the worldwide custody and safekeeping of investment assets. Securities lending systems automate the functions associated with worldwide securities lending activities.

SunGard's principal trust, global custody, and securities lending systems are summarized in the following table.

**Trust, Global Custody
and Securities Lending Systems**

System	Platform	Mode of Delivery	Primary Markets
AUTOTRUST®	IBM mainframe	Remote processing service	Small and medium-sized bank trust departments
OMNI ES™	IBM mainframe	Software license and remote processing service	Large and medium-sized bank trust, custody, and security departments
OMNI IC™	Scalable, multiplatform	Software license	Bank global custody departments
OMNILEND™	IBM mainframe UNIX workstation	Software license and remote processing service	Banks, broker/dealers, and other financial institutions
OMNI IFS™	Microcomputer UNIX workstation	Software license	Banks, broker/dealers, and other financial institutions
MICROTRUST®	Microcomputer	Software license	Small bank trust departments

- During 1995, the first major phase of development of a Windows version of AUTOTRUST, known as the CHARLOTTE™ system, was completed.
- SunGard also consolidated its single-currency large bank trust department product, OMNITRUST®, and its multi-currency global custody product, OMNI GS®, into the single product, OMNI ES, during 1995.

- OMNILEND, SunGard's principal lending product, was acquired through the purchase of DML in February 1995.

EXPEDITER™, which facilitates the automated entry of mutual fund transactions, is also marketed to the company's trust accounting systems customers.

Derivatives Trading Systems

SunGard's derivatives trading systems are also used primarily by the "sell side" of the investment business. These systems provide trading support, risk management, trade

processing, and accounting functions. They also assist with hedging strategies and monitoring compliance with capital

requirements, trading limits, and government regulations.

The following table shows the principal software products in this category.

Derivatives Trading Systems

System	Platform	Mode of Delivery	Primary Markets
DEVON DERIVATIVES SYSTEM™	Windows NT UNIX workstation	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
DEVON FOREX SYSTEM™	UNIX workstation	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
PANORAMA™	Windows NT	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
DEVON SECURITIES SYSTEM™	Windows NT	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
INTAS®	UNIX workstation Digital workstation	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
OPTAS®	UNIX workstation Digital workstation	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
OPUS®	UNIX workstation	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
TRADENET™	Windows Windows NT UNIX workstation	Software license	International bank trading rooms and capital markets departments; trading rooms of other financial institutions
OCTAGON™ FUTURES SYSTEM	UNIX workstation Digital workstation	Software license and remote processing service	International banks and brokerage firms active in the futures markets for principal and customer business

The OPUS risk management and interest rate derivatives application product family was acquired with the acquisition of Renaissance Software, Inc. in November, 1995.

Participant Accounting Systems

Participant accounting systems automate the investment operations associated with defined contribution retirement plans such as 401(k) plans.

Participant Accounting Systems

System	Platform	Mode of Delivery	Primary Markets
OMNIPLAN® OMNIPAY® OMNIDBEN™	IBM mainframe	Remote processing, software license, and full service bureau processing	Corporate, bank, and other retirement plan managers
	UNIX workstation	Software license	Corporate, bank, and other retirement plan managers
	IBM AS/400	Software license	Corporate, bank, and other retirement plan managers
	Microcomputer	Software license	Corporate, bank, and other retirement plan managers
MPR™	Microcomputer	Software license	Small and medium-sized banks

During 1995, SunGard continued development of OMNIPLUS™, the successor to OMNIPLAN, which will support all types of defined contribution plans.

Investment Reporting and Analysis Systems

Investment reporting and analysis systems accept accounting data from other investment

support systems, perform special analyses for fund managers and customers, and produce regulatory reports for retirement plan sponsors and participants.

The company's principal software products in this category are shown in the table below.

Investment Reporting and Analysis Systems

System	Platform	Mode of Delivery	Primary Markets
DATAPREP™ EMBERS®	IBM mainframe	Remote processing & software license services	Corporate, bank, and other retirement plan managers
SUPERF4®	IBM mainframe	Remote processing & software license services	Corporate, bank and other retirement plan managers
OMNISTATION™	UNIX workstation	Software license	Large and medium-sized banks

During 1995, SunGard introduced GLOBAL CLIENT REPORTING™, which provides comprehensive investment reporting of all assets and liabilities for both master trust and global custody accounts.

Shareholder Accounting Systems

Shareholder accounting systems automate the transfer agent process for stock, bond, and mutual fund issues. The company's principal shareholder accounting systems are shown below.

Shareholder Accounting System

System	Platform	Mode of Delivery	Primary Markets
INVESTAR®	IBM mainframe	Remote processing service	Large mutual fund managers and transfer agents
SUNSTAR®	IBM mainframe UNIX workstation	Remote processing service and software license	Large bank, corporate, and utility stock and bond transfer agents

SunGard also markets POWERIMAGE®, a work-flow management and document-imaging software system, to users of its shareholder accounting systems.

Key Products and Services—Disaster Recovery Services

SunGard Recovery Services Inc.'s recovery services are marketed, directly and through representatives, to users of Digital, and IBM (and compatible) mainframe computers, HP and IBM midrange (AS/400, RS/6000, and Systems/3X) computers, and Sequent, Stratus, Tandem, and Unisys computers.

SunGard's Work Group RecoverySM, is the company's disaster recovery service that includes five multipurpose testing and recovery MetroCenters® in the U.S.

- These multiple hotsite and coldsite facilities provide customers with the use of general office space and office equipment, as well as enhanced remote operation capabilities for using SunGard's disaster recovery systems for tests or recovery operations without traveling to a SunGard hotsite.

- This service also includes MegaVoice®, a centralized voice communications recovery service that can redirect the customer's incoming telephone calls to the alternate recovery site.
- MetroCenters are located in Boston (MA), Dallas (TX), Toronto (Canada), St. Paul (MN), St. Louis (MO), Santa Ana (CA), Herndon (VA), Jersey City (NJ), Beechwood (OH), and Northvale (MI).
- During 1995, SunGard introduced Program Management ServicesSM, which encompasses the design, coordination, and management of all aspects of a customer's disaster recovery programs.

Most of the company's disaster recovery customers purchase a basic package of services that includes:

- Use of a hotsite for six weeks to recover from any computer center failure
- Use of a coldsite for six months if recovery operations must continue for more than six weeks

- Use of a hot site to regularly test disaster recovery procedures
- Use of adjacent office and terminal space during recovery operations and tests
- Technical assistance when conducting recovery operations and tests
- Technical assistance with designing and implementing a backup communications network

SunGard's MegaCenters® are multiple hot site and cold site facilities that customers may use directly or remotely.

SunGard operates five MegaCenters as follows:

- Atlanta, with eight Digital, one Prime, and one Texas Instruments hot site
- Chicago, with three IBM mainframe, three IBM midrange, one Tandem, and one Unisys (mobile) hot site
- Philadelphia, with five Digital, seven HP, four IBM mainframe, one Sequent, four Stratus, and two Tandem hot sites, and nine mobile HP, ten IBM midrange, one NCR, and six Sun Microsystems computer systems. In 1995, this facility also opened a local-area network (LAN) server center.
- Warminster (PA), with six Unisys hot sites
- Scottsdale (AZ), with five Prime and five Unisys computers, and one Unisys mobile computer

As of December 31, 1995, SunGard had approximately 6,300 disaster recovery contracts in force. These contracts generally require the payment of monthly fees and range in duration from one to five years.

During 1995, SunGard continued expanding its matrix switching capabilities to allow for more efficient communications during customer tests and recovery operations. The company is also implementing a synchronous optical network (SONET) in the New York, northern New Jersey, and Philadelphia markets, which was to be operational in early 1996.

In 1995, the customer base of the company's Unisys platform offerings was expanded through the acquisition of the Newtrent Division of Electronic Data Systems Corporation.

Through SunGard Planning Solutions Inc., the company provides disaster recovery-related consulting and education professional services and software products.

- Professional consulting services for disaster recovery and business resumption planning include risk analyses; developing, preparing, and updating customized disaster recovery plans and manuals; and auditing customers' disaster recovery procedures and recommending improvements.
- SunGard regularly conducts seminars and industry conferences on disaster recovery and related topics.
- The company also markets DP/90 PLUS®, a microcomputer software package that automates the preparation and maintenance of disaster recovery plans.
- SunGard also markets CBR™ Comprehensive Business Recovery, a Windows-based microcomputer software product that automates the preparation and maintenance of disaster recovery plans.

- In March 1995, the disaster recovery planning software business of ChiCor Information Management, Inc. was acquired, augmenting the company's disaster recovery services.

Key Products and Services—Computer Services and Other

Computer Services

SunGard provides remote-access computer services primarily to software developers and government agencies, and also provides outsourcing services. In addition, the company provides direct marketing computer services and automated mass

mailing and printing services through computer centers in Voorhees (NJ) and Birmingham (AL).

Healthcare Information Systems

The Healthcare Information Systems Group, formed in 1995, provides work-flow management and document-imaging systems primarily to health care institutions and health insurance companies, as well as to financial institutions, corporations, and government agencies.

SunGard's principal systems in this category are shown in the following table.

Healthcare Information Systems

System	Platform	Mode of Delivery	Primary Markets
I-MAX™	Microcomputer	Software license	Health insurance companies
ChartFlo® 2000	UNIX workstation Microcomputer	Software license	Hospitals, health care institutions, and medical clinics
AccountFlo™	UNIX workstation Microcomputer	Software license	Hospitals, health care institutions, and medical clinics
ProcessFlo®	UNIX workstation Microcomputer	Software license	Banks and other financial institutions, and government agencies

The Healthcare Information Systems Group is comprised of Intelus Corporation, acquired in August 1995, and MACESS Corporation, acquired in October 1995.

Marketing and Sales

SunGard markets its specialized computer services and software throughout the U.S. and internationally via its direct sales force. The company develops and maintains proprietary marketing information by identifying prospective customers through a variety of databases and other sources, then marketing directly to them. SunGard also conducts seminars and participates in industry conferences to attract customers.

Alliances

SunGard Recovery Services and Applied Communications Inc. (ACI) have an alliance combining SunGard's disaster recovery expertise with ACI's Tandem-specific support through its ASTech Services program to offer Tandem users enhanced subscriber testing and recoverability.

SunGard Planning Solutions has marketing relationships with LEGENT Corporation and Dialogic Communications Corporation (DCC) whereby SunGard can market LEGENT's Sunrise automated recovery software and DCC's PC-based disaster recovery telenotification software.

SunGard also has alliances/marketing agreements with various vendors as follows:

- GE Capital Computer Leasing
- Bell Atlantic Business Systems Services

Competition

SunGard's primary competitors for its computer disaster recovery services include Comdisco Disaster Recovery Services, Inc. and IBM (Integrated Systems Solutions Corporation).

Although SunGard has no major competitors for its investment support systems, there are numerous other data processing and financial software vendors, categorized into two broad groups—smaller specialized investment support systems companies, and larger computer services companies whose principal businesses are not in the investment support

systems area, such as Automatic Data Processing, Inc. and First Data Corporation.

The health care information systems business competes primarily with larger companies that provide imaging systems to multiple industries.

INPUT Assessment

SunGard has distinguished itself from competitors by the spectrum of investment support system products offered. As well, by providing its disaster recovery products and services on multiple platforms, the company is offering comprehensive services that provides it with a competitive advantage over other providers. This depth and variety of offerings supports the company's goal of becoming a one-stop shopping provider in the investment support systems and disaster recovery services markets.

COMPANY HIGHLIGHT

SUN INFORMATION SERVICES COMPANY

280 King of Prussia Road
Radnor, PA 19087
(215) 293-8000

John M. Ryan, President
Subsidiary of Sun Company, Inc.
Total Employees: 1,500+
Total Revenue, Fiscal Year End
12/31/81: \$123,000,000
Noncaptive Revenue: \$53,000,000*

THE COMPANY

- Sun Information Services (SIS) was formed in 1975 to provide internal EDP services for its parent, the Sun Company, and to develop a commercial computer services business. During the past few years, SIS acquired a number of small companies in bank processing services and developed a business base in remote computing, disaster recovery services, and software products.
- In September 1982, the Sun Company announced that it planned to sell most of the commercial operating units of SIS to a group of existing SIS executives and a group of venture capitalists led by Welsh, Carson, Anderson & Stowe and J.H. Whitney & Co. The Sun Company plans to retain a financial interest in SIS.
 - Operating units involved in the proposed sale are SIS's Sungard and Data Services Divisions, based in Radnor, and three financial subsidiaries: NMF, Inc. (Charlotte, NC), Applied Financial Systems, Inc. (San Mateo, CA), and Catalactics, Inc. (Hinsdale, IL).
 - Weiland Computer Group, a bank processing subsidiary near Chicago, was sold to Electronic Data Systems in a separate transaction. Weiland had annual revenue of about \$13 million.
- The commercial business base retained by SIS will generate an estimated \$45 million in revenue at the end of 1982. SIS will provide certain specialized data processing services to the Sun Company and will continue to use Sun data centers in Dallas and Richardson (TX) for processing.
- The following financial summary includes SIS's noncaptive and captive revenue prior to the divestiture.

*INPUT estimate

SUN INFORMATION SERVICES COMPANY

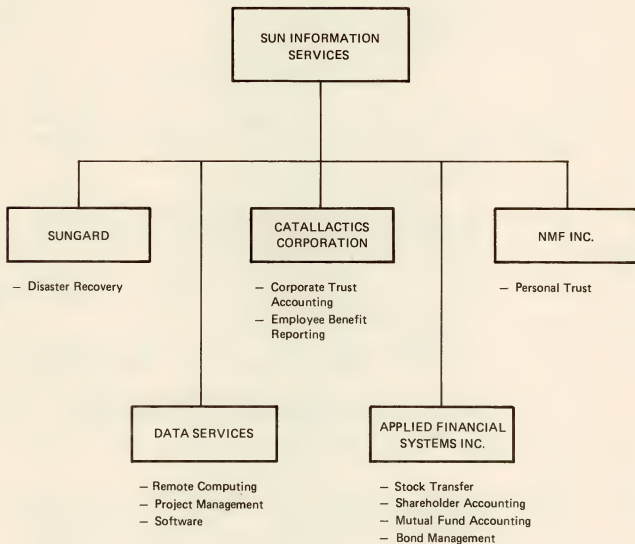
SIS
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions)

ITEM \ FISCAL YEAR	1981	1980	1979	1978	1977
Noncaptive revenue (INPUT estimate)	\$ 53	\$35	\$20	\$15	\$ 7
Percent increase from previous year	51%	75%	33%	114%	N/A
Captive revenue	\$ 70	\$60	\$50	\$35	\$33
Total revenue	\$ 123	\$95	\$70	\$50	\$40

- Other divestitures made by SIS within the last year include:
 - SIS of Kentucky, a portion of Metridata Computing Inc. which SIS acquired in 1979, was sold in 1981.
 - A micrographics division, based in Philadelphia and Princeton, was sold to NLT Computer Services in December 1981.
- The sale of Weiland Computer Group to EDS also included the Metropolitan Computer Center, Inc. (MCCI), a company SIS acquired in 1981. MCCI was merged into Weiland in 1982.
- The major organizational components and services offered by the new SIS organization are listed in Exhibit A.
- Of the 1,500 former SIS employees, approximately 400 will be retained in the new organization.
- Major competitors by functional area are:
 - Financial industry services: SEI, National Computer Systems, Bradford National Corporation, Financial Statistics, Inc., Key Financial, and Index System.
 - Disaster recovery services: Comdisco.
 - Stock transfer trust services: Data Systance and Bank of New York.
 - Remote computing services: Boeing Computer Services, MCAUTO, Tymshare, CYBERNET, and Martin Marietta.

SUN INFORMATION SERVICES COMPANY

EXHIBIT A



KEY PRODUCTS AND SERVICES

- INPUT estimates SIS's noncaptive revenue for 1981 as follows (figures include Weiland):

	<u>Percent</u>	<u>Revenue</u>
Processing Services	79.0%	\$42
Software Products	9.5	5
Professional Services	9.5	5
Integrated Systems	<u>2.0</u>	<u>1</u>
	100.0%	\$53 million

- Applied Financial Systems (AFS) offers software and processing services for stock transfer/shareholder accounting, mutual fund accounting, and automated bond management.
 - Key products offered by AFS are:
 - Investor Processing System (IPS) offers shareholder recordkeeping and transfer processing for banks and corporations acting as their own transfer agent.
 - The Automated Bond System (TABS) provides automated cash accounting, customer billing, and reconciliation of all bond accounting activity.
 - Mutual Funds System provides shareholder, rate, correspondence, transaction, dividend check, and accounting information.
 - AFS's targeted marketplace is the top 150 banks, mutual fund management companies, and corporations with more than 35,000 stockholders.
 - Processing for AFS clients is performed from Sun's data center in Dallas.
- Catalactics Corporation provides processing services for employee benefit accounting and reporting, fund accounting, and investment management. Areas of specialization include institutional trust reporting and investment performance. Custom software development is also performed in areas such as investment performance measurement, investment decision support, and bond management accounting.
 - The nucleus of Catalactics' trust accounting system is the Employee Benefit Reporting System (EMBERS). EMBERS is a family of individual systems that share a common data base and file-building technique. Components of EMBERS include:

- EMBERS/FSR (Financial Statement Reporting) produces accounting and investment performance reports, including consolidated reports for master trusts.
- EMBERS/PAR (Plan Allocation Reporting) provides plan allocation schedules for items like trade dating, income accrual, and multiple fund/plan relationships.
- EMBERS/CFR (Collective Fund Reporting) maintains collective fund portfolios and provides unit valuations.
- EMBERS/IPM (Investment Performance Measurement) offers trade dating, income accrual, and asset categorization for measuring investment performance.
- EMBERS/INC (Income Review and Reconciliation) provides distribution of interest and dividend income to trust clients. It computes asset positions of record and the amount of income expected, then matches them against income posted, providing an audit trail for further research if needed.
- FUND ONE, sold as a software package or available as a processing service from Catalactics, is a fund management system. It analyzes fund activity and provides numerous activity, investment, evaluation, operation and user reports.
- Catalactics' targeted marketplace is the trust departments of the top 150 banks.
- NMF, Inc. provides processing services and markets software products for personal trust, participant accounting, and coupon bond management. NMF services include:
 - AUTO-TRUST and the Participant Accounting System (PACS) are processing services provided by NMF. Both services use intelligent terminals installed in trust departments.
 - Features of AUTO-TRUST include:
 - Complete common trust fund accounting.
 - Pricing for all listed stocks and corporate and municipal bonds.
 - Automatic posting of security purchases to suspend accounts for payment versus delivery.
 - Collateral requirements reporting.
 - Complete tax lot accounting.
 - Federal and state tax ledgers.
 - Oil and gas accounting.
 - Regulatory reports for FDIC and the Comptroller of Currency.

- PACS provides accounting and participant recordkeeping functions for the following types of employee benefit plans:
 - Profit sharing.
 - Money purchase pension.
 - HR10 (single or masterplans).
 - ESOPS.
 - TRASOPS.
 - Multiple investments.
 - Integrated plans.
 - Thrift plans.
- V-System 4, V-System 5, and NMF Coupons are software packages marketed by NMF. All three operate on IBM equipment.
 - V-System 4 is a trust accounting system for medium-sized trust departments. Over 100 reports are produced by the system.
 - V-System 5 is a real-time, on-line, multibank software system for trust accounting.
 - NMF Coupons is a real-time, on-line coupon bond software system.
- The Sungard Division is the leading vendor of disaster recovery services.
 - Sungard subscribers include over 160 major financial and industrial corporations who receive guaranteed backup in the event of a major failure at their data processing centers.
 - Sungard opened its first center in Philadelphia in 1979. A second center in Philadelphia was opened in 1980 and a third, near Chicago, was added in December 1981.
 - Timesharing services, remote batch, and block time processing are also sold by Sungard on a preemptive basis.
- The Data Services Division offers remote computing services on IBM and CDC equipment from two data centers in Dallas.
 - Leading products include:
 - Suneco, an environmental system for tracking air emissions, water pollution, and hazardous waste shipments for government reporting.
 - SunHealth, a management information system for occupational health and safety personnel in major companies who must gather, analyze, and manage occupational health data for federal agencies and other reporting purposes.

- . Sunflow, a management information system that allows control of the daily operational activities of order entry, order processing, product allocation, and distribution.
- . Project Information and Cost Management System (PICOM), a specialized data-handling system which controls and monitors cost and manpower in a project management environment.
- . Project Resource Evaluation and Management Information System (PREMIS), uses proven network analysis techniques to establish a disciplined method of project planning, scheduling, and controlling.
- . PREMIS/PICOM Interactive Execution Module, allows users to run cost/scheduling software from terminals in a demand mode.
- . SUNPLOT Scheduler/Plotting System, works in conjunction with PREMIS Scheduling System to produce Gantt barcharts and time-phased network diagrams on digital incremental or electrostatic plotter hardware.
- . SUNPLAN II Total Project Management, a set of software, hardware, and services components to address unique project management requirements.
- . Automated Structural Steel Detailing System (ADSTEEL), a software package capable of creating - in a batch environment - structural steel fabrication drawings, along with various time-saving reports such as field and shop bolt counts, welding quantities, total weights of steel, and piece work summaries.
- A list of application products available on the SIS network is presented in Exhibit B.
- Software product revenue comes from banking applications and specialty products for pressure vessel design, process flow simulation, and pump selection calculations.
- Turnkey systems revenue came from the sale of the SIS Automated Bulk Terminal (ABT) system. SIS may sell the ABT product to another firm.

INDUSTRY MARKETS

- Approximately 65% of SIS's revenue is derived from the banking and financial industries. The remainder comes from insurance, manufacturing, distribution, utilities, and government.

EXHIBIT B

SUN INFORMATION SERVICES
NETWORK PROFILE

APPLICATION AREA/PRODUCT NAME

- Operating Environment
 - IBM 370/303x, 308x, MVS, TSO, VM/CMS, WYLBUR
 - CDC CYBER 750, NOS/BE, INTERCOM
- Programming Languages Supported
 - APL
 - ASSEMBLER
 - BASIC
 - COBOL
 - COMPASS
 - FORTRAN
 - PL1
- Data Management Software
 - ADABAS
 - EASYTRIEVE
 - FASTFORM
 - IMS and IMS Test
 - RAMIS II
 - SYSTEM 2000
- Financial Applications/Tools
 - Financial Planning and Modeling (EMPIRE)
- Graphics/Plotting
 - CPS1
 - DISSPLA
 - PIGRAPH
 - SunChart
 - SunPlot
 - Surface Display Library, Surface Gridding Library
 - TELL-A-GRAF
- Contract/Project Management
 - EZPERT
 - Project Information and Cost (PICOM)
 - PICOM/POISE
 - Project Resource Evaluation (PREMIS)
 - PREMIS/POISE
 - Product and Resource Optimization (PROM)
 - SunPlan II

APPLICATION AREA/PRODUCT NAME

- Proprietary Products
 - Suneco
 - Sun Health
 - Sunflow
 - ADSTEEL
- Scientific and Engineering
 - Simulation and Modeling (GPSS and Simscript 11.5)
 - Mathematical Programming (MPS III)
 - Automated Drafting (ADSTEEL, ADSFORM)
 - PROSE
 - Process (Flow Sheet Simulator)
- Structural Analysis
 - Ansys - 3 (Structural/Heat Transfer)
 - GPFS (Flow Simulator)
 - GENDIS (Heat Transfer)
 - Horizontal Pressure Vessel Design (HPVD)
 - Mechanical Design of Heat Exchangers (MEDHEX)
 - Multicomponent Fractionation Program (MFRAC)
 - NASTRAN
 - Orifice Rating and Design Program (ORD)
 - Shell and Tube Heat Exchanger Rating (STHER)
 - STAAD
 - SMUG
 - Turbo Rotor Dynamics Library
 - Vertical Pressure Vessel Design (VPVD)
- Other
 - Statistical Analysis (SAS)
 - SPSS

GEOGRAPHIC MARKETS

- Almost all of SIS's revenue is derived from the U.S.; less than 1% is from overseas markets.

COMPUTER HARDWARE AND SOFTWARE

- Under the new organization, SIS will own four data centers. Hardware and services provided at the centers are as follows:
 - Charlotte, NC (NMF Inc., trust processing).
 - . 1 IBM 370/158.
 - Philadelphia, PA (two separate data centers for Sungard).
 - . 1 IBM 3031.
 - . 1 IBM 3033.
 - Chicago, IL (Sungard).
 - . 1 IBM 3081.
- A data center in Dallas, owned by the Sun Company, will be used for some of SIS's IBM commercial processing. Resources include:
 - 3 IBM 3033s.
 - 1 IBM 3081.
- A second data center in Richardson (TX), owned by the Sun Company, will be used for CYBER scientific processing.
- SIS's remote computing services are available nationally.



*Dennis VALVODA
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ERIC GEISA*

COMPANY HIGHLIGHT

SUN INFORMATION SERVICES COMPANY

680 E. Swedesford Road
Wayne, PA 19087
(215) 293-9600

John M. Ryan, President
Subsidiary of Sun Company, Inc.
Total Employees: 1,200
Total Revenues, Fiscal Year End
12/31/78: \$50,000,000*
Non-Captive Revenues: \$25,000,000*

THE COMPANY

- Sun Information Services Company (SIS) was formed in 1975 by its parent organization, Sun Company, to provide external computer services in addition to supporting internal EDP functions for affiliated companies. SIS presently provides remote computing and batch services, markets software and processing services for the banking industry, offers a disaster recovery service, and provides support services for electronic and telecommunication systems.
- INPUT estimates SIS 1978 revenues were approximately \$50 million, a 25% increase over 1977 revenues of \$40 million. Approximately half of SIS' revenues is derived from the Sun Company and its operating units. Through aggressive marketing, acquisitions, and investment in new business development projects, SIS projects revenues exceeding \$100 million by 1981.
- SIS is organized into three divisions:
 - Computer Services Division provides remote computing services, disaster back-up and recovery services, professional services and micrographic services.
 - Banking Services Division markets software packages and provides processing services to financial institutions.
 - Electronics and Telecommunications Systems Division (ETSD) has developed products and services to be used in the capture, recording, transmission and management of electronic information and data.
- SIS has targeted the banking and finance industry, disaster recovery services, and process manufacturing for expansion efforts. The company's entry into banking and finance services has been through four acquisitions:

* INPUT Estimate

COMPANY HIGHLIGHT/SUN INFORMATION SERVICES COMPANY

- Catalactics Corporation, Hinsdale, Illinois, acquired in November 1979: Catalactics provides data processing systems and services to bank trust departments. Applications include trust client reporting, performance measurement, and master trust and employee benefit accounting systems. Established in 1967, Catalactics reported revenues of about \$5 million in 1978 and employed 50 people.
- Computing Division of Metridata Computing, Inc., Louisville, Kentucky, acquired in February 1979: Metridata manages the data processing facilities of First Security National Bank of Lexington, KY, and for the Exchange National Bank of Chicago. The division reported revenues of \$5.4 million in 1978 and has about 140 employees. SIS renamed the division Sun Information Services of Kentucky and merged the Chicago computing operations into the Weiland Computer Group.
- Weiland Computer Group, Inc., Oakbrook, Illinois, acquired in May 1978: Weiland markets software products for the banking industry and provides facilities management services to two large Chicago-area bank service organizations. These facilities provide a complete range of on-line services to banks. Weiland reported revenues of \$2.8 million in 1977, and employs 230 people.
- Applied Financial Systems, (AFS) Inc., San Mateo, CA, acquired in May 1977: AFS specializes in providing trust services to banks and stockholder record keeping services to banks and mutual funds. AFS' shareholder accounting services are concentrated in California. Trust service clients are located in Texas, Ohio, and the mid-Atlantic states. AFS reported revenues of \$965,000 in 1976 and employs 50 people.
- Major competitors of SIS include Boeing Computer Services, MCAUTO, Martin Marietta, Service Bureau Company, Automatic Data Processing, GEISCO, Informatics, and Interactive Data Corporation.

KEY PRODUCTS AND SERVICES

- In 1978, SIS derived its computer services revenues as follows:

SIS COMPUTER SERVICES REVENUES

<u>Service</u>	<u>Percent of Total</u>	<u>Estimated Revenue Value (\$ Millions)</u>
Processing Services	62%	\$31.0
Software Products	3	1.5
Professional Services	20	10.0
Turnkey Systems	5	2.5
Other	10	5.0
	100%	\$50.0

COMPANY HIGHLIGHT/SUN INFORMATION SERVICES COMPANY

- Other consists of equipment leasing, micrographics supplies, and ETSD division revenues.
- An additional breakdown of SIS processing revenues follows:

SIS PROCESSING SERVICES REVENUES

-	Type of Processing	
	• Remote Computing	80%
	• Batch Services	10
	• Facilities Management	5
	• Other	<u>5</u>
		100%
-	Modes of RCS Services	
	• Interactive	20%
	• Remote Batch	74
	• Inquiry/Response	<u>6</u>
		100%
-	Applications	
	• General Business	55%
	• Scientific and Engineering	15
	• Utility	10
	• Industry Specialty	<u>20</u>
		100%

- The Computer Services Division (CSD) offers a variety of services to customers in the manufacturing, petroleum, distribution, federal government, banking, architectural and engineering, and construction industries. Major services provided by CSD include:
 - Remote computing services are offered on IBM and CDC equipment from three data centers. A profile of available applications is presented in Exhibit A. Applications emphasized are as follows:
 - Distribution Services: railroad car management and location.
 - Management Control Services: products for project management, mathematics, simulation, and statistical applications.
 - Technical Services: scientific and engineering applications.
 - Data Base Management Services.
 - Financial and Planning Services.

EXHIBIT A
SUN INFORMATION SERVICES
NETWORK PROFILE

APPLICATION AREA/PRODUCT NAME	APPLICATION AREA/PRODUCT NAME
• OPERATING ENVIRONMENT -- IBM 370/303X, MVS, TSO, WYLBUR -- CDC CYBER 172, NOS/BE, INTERCOM • PROGRAMMING LANGUAGES SUPPORTED -- ASSEMBLER -- COBOL -- FORTRAN • DATA MANAGEMENT SOFTWARE -- DATIM -- EASYTRIEVE -- IMS AND IMS TEST -- RAMIS II • FINANCIAL APPLICATIONS/TOOLS -- FINANCIAL PLANNING AND MODELING (EMPIRE) -- PETROLEUM INVESTMENTS (KASH) -- STRATEGIC ANALYSIS (SAM 1.5) -- FISCAL IMPORT ANALYSIS (FIAS 5.0) -- SALES PROJECTION AND SCHEDULING (STAMPS 1.5) -- LOGISTICS ANALYSIS (LASS 2.5) • GRAPHICS -- DISSPLA -- MFRAC	• CONTRACT/PROJECT MANAGEMENT -- PROJECT INFORMATION AND COST (PICOM) -- PROJECT RESOURCE EVALUATION (PREMIS) -- PRODUCT AND RESOURCE OPTIMIZATION (PROM) -- CONSTRUCTION MANAGEMENT (CMCS) • SCIENTIFIC AND ENGINEERING -- SIMULATION AND MODELING (GPSS AND SIMSCRIPT 11.5) -- STATISTICAL ANALYSIS (SAS) -- MATHEMATICAL PROGRAMMING (MPS III) -- AUTOMATED DRAFTING (ADSTEEL, ADSIP) -- IMSL LIBRARY OF PROGRAMS -- PROSE • STRUCTURAL ANALYSIS -- ANSYS-3 (STRUCTURAL/HEAT TRANSFER) -- GPFs (FLOW SIMULATOR) -- GENDIS (HEAT TRANSFER) -- STAAD (3-D FRAMED STRUCTURES) -- SMUG PROGRAM LIBRARY -- SSI/100 (HEAT TRANSFER) -- TURBO ROTAR DYNAMICS LIBRARY

COMPANY HIGHLIGHT/SUN INFORMATION SERVICES COMPANY

- SUNGARD Disaster Back-up and Recovery Service was announced in July 1978 and became operational in January 1979 with the opening of a new data center in Philadelphia. The service provides a complete back-up and recovery capability for corporations in the event their data center is shut down. SIS presently has over 45 SUNGARD clients.
 - SUNGARD Computer Services offers reduced rates for time-sharing and remote batch processing and sells block computer time.
- CSD markets a microcomputer system called the Automated Bulk Terminal System (ABT). ABT is a distribution management system which controls the shipping of both liquid and bulk products. It effectively handles process control activities and accounting functions while addressing product security and safety. The price of ABT ranges from \$30,000 to \$60,000 depending on options. Approximately 25-30 systems have been installed. ABT uses a Data General Micro Nova.
- CSD provides professional services including contract programming, systems design, and consulting. The majority of these services are performed as an add-on to other SIS services.
- Micrographic services include the production of microfilm, microfiche, and computer-output-microfilm. SIS is also a distributor for micrographics equipment.
- The Banking Services Division which employs over 400 professionals, offers a broad range of computer software packages for banks and their trust departments, as well as facilities management and processing services for commercial banks. The Division is composed of four subsidiary operations: Catalactics, Sun Information Services of Kentucky, Weiland Computer, and Affiliated Financial Systems.
 - Software packages include demand and time deposit accounting, installment loans, a central information file, and a bank terminal control system.
 - The division currently provides facilities management support to five bank groups in the Midwest. At these sites, SIS manages the computer operations as well as providing systems and programming support for program development and maintenance.
 - Bank data services are provided to over 60 banks through three SIS centers in Chicago, Louisville, and Lexington, KY. SIS Management plans to extend its data services offerings to banks in other selected geographic areas. An on-line terminal based stock transfer system is available as a remote service or may be installed on the user's computers.

COMPANY HIGHLIGHT/SUN INFORMATION SERVICES COMPANY

- Corporate stockholder record keeping services, furnished mainly to bank trust departments, are administered out of San Mateo, CA and are processed at the SIS Dallas Computer Center.
- The Electronics and Telecommunications Systems Division (ETSD) is a new division which is developing products and services for electronic and telecommunications uses. ETSD services are currently only available for internal use though management eventually plans to offer them commercially.

INDUSTRY MARKETS

SIS derives its revenues from the following industry sections:

- Manufacturing	50%
- Banking	15
- Distribution	10
- Utilities	5
- Services	5
- Government	5
- Other	10
	100%

GEOGRAPHIC MARKETS

- Approximately 98% of SIS' revenues are derived from the U.S. and 2% from international sources. Following are percentages from U.S. geographic regions:

- New England	4%
- Middle Atlantic	45
- East North Central	10
- South Atlantic	4
- East South Central	10
- West South Central	19
- Mountain States	1
- Pacific	5
	98%
- SIS has branch sales offices in Dallas and Houston, TX; Philadelphia and Wayne, PA; Princeton, NJ; New York, NY; Boston, MA; Westport, CT; Chicago, IL; Tulsa, OK; Washington, DC; and Los Angeles, CA. Principle subsidiary offices are located in San Mateo, CA; Oak Brook, IL; Hinsdale, IL; Lexington, KY; and Louisville, KY.

COMPUTER HARDWARE AND SOFTWARE

- SIS maintains two IBM computer centers in Philadelphia and Dallas, and a CDC center in Richardson, TX. The IBM centers provide general business and

COMPANY HIGHLIGHT/SUN INFORMATION SERVICES COMPANY

scientific and engineering services. The CDC center is primarily used for scientific and engineering services including reservoir modeling applications. Equipment located in the data centers consist of:

- 3 IBM 370/3033s under MVS Release 3.8/JES2.
 - 2 IBM 370/168s under MVS Release 3.8/JES2.
 - 1 CDC Cyber 172, NOS/BE.
 - 1 CDC 6400.
- SIS' network services from the Dallas IBM center extend to Europe and Canada via Tymnet.
 - The Banking Services Division maintains data centers in Chicago, Louisville, and Lexington, KY. Equipment located in these centers includes IBM 370/145s, 370/135s, 360/65s, 360/40s, 360/30s, and Honeywell 400s.



cc: C. Eric Sica
Sof Parisi
C. Varga
Etk

COMPANY HIGHLIGHT

SUN INFORMATION SERVICES CO.
656 East Swedesford Road
Wayne, PA 19087
(215) 293-9600

↓
John M. Ryan, President
Wholly owned subsidiary of
Sun Company, Inc.
Total employees: 700
Total revenues, fiscal year
end 12/31/76: 40,000,000*

THE COMPANY

- Sun Information Services Company (SIS) was founded as Suntech in Philadelphia in 1976 by Sun Company (formerly Sun Oil Company) as part of the Sun Company's strategy to expand into promising new business areas outside its traditional businesses. The name was changed to Sun Information Services in 1977.
- Sun Information Services currently is a \$40 million network information services vendor that operates in three business areas: data processing and computer services using its own systems and communications network, telecommunications services, and other related services. In these areas Sun Information Service is:
 - earning profits at competitive levels
 - serving the Sun family of customers effectively, and
 - continuing to gain a share of new external markets.
- The SIS approach is to identify high growth target industry/market segments; find an entry niche where specialized knowledge or Sun Company strength can provide a competitive edge, acquire or develop that competitive position, enter the market segment, penetrate, expand, and extend it into a major market position. Target markets that have initially been selected are banking and finance, legal services, and process manufacturing. SIS' expansion will take place through internal growth and through acquisitions in selected markets.
- Through its marketing and investment plans for new business development projects that will be a force in the computer services industry with revenues reaching an estimated \$130 million by 1982.
- Approximately 90% of SIS's revenues are derived from Sun Company and its operating units. Parent operating units contracts with SIS are generally gained on a competitive bidding basis. An aggressive marketing effort was launched in 1976 to increase the percentage of revenues from external clients.

*
INPUT estimate

COMPANY HIGHLIGHT/SUN INFORMATION SERVICES CO.

- SIS revenues per employee are almost double the industry standard as it requires relatively little marketing staff to sell and service its prime user: Sun Company.

KEY PRODUCTS AND SERVICES

- SIS data processing services include processing services, professional services, software products, and COM services to approximately 180 commercial users in addition to its parent.

- Processing services produced the largest amount of total SIS revenues, as shown below:

- Processing services		70%
Remote batch	60	
Interactive remote computing	7	
Batch and data entry	3	
- Professional services		24
- Software products		2
- Other (micrographics)		4
		<u>100%</u>

- Batch services include key to tape or key to disk remote data entry.
- Specific products available through SIS include:
 - Banking and finance (and other related financial management services). The acquisition of Applied Financial Systems, Inc., of San Mateo, California, provides an entry vehicle whereby corporate shareholder recordkeeping services are marketed through trust departments of banks.
 - Legal services industry word processing and data processing to medium and large size law offices). This service, entitled SUNLAW, is a venture development alternative to acquisition. SIS gained extensive applications knowledge and marketing contracts by funding a group of individuals in the selected target market: law.
 - Manufacturing services, sold initially to Sun Company customers, are now being leveraged to commercial customers. These services include:
 - ABT (Automated Bulk Terminal) Systems. This is a turnkey system for industries such as petroleum and chemical where products are dispensed in bulk.
 - ADSTEEL. An automated drafting service and software for detailing structural steel for buildings and open frame structures.

COMPANY HIGHLIGHT/SUN INFORMATION SERVICES CO.

- PROM, a linear programming service for simulating refining and petrochemical operations in order to maximize revenues.
- ADSIP, an automated drafting system developed for isometric piping.
- GPFS, a generalized process flow simulator for chemical processes to evaluate and control heat and material balances for process manufacturing.
- Software packages developed by other vendors and licensed to SIS:
 - PREMIS (Project Resource Evaluation and Management Information System), a software package developed by K&H Computer Systems in England.
 - PROSE (Problem Solving Engineering System), from Prose, Inc., provides both a mathematical problem statement language and a library of numerical solution methods.
 - ANSYS, from Swanson Analysis Systems, Inc. is a finite element analysis program used by structural engineers.
 - DISSPLA (Display Integrated Software System and Plotting Language), from ISSCO, permits on-line or off-line plotting on any graphic output device.
- SIS also offers a variety of general business services.
- Professional services include contract programming, systems design, and consulting. Much of these services are performed as add-ons to other SIS services.
- Micrographics services include microfilm, microfiche, and computer output microfilming. These revenues represent a significant portion of external revenues.

APPLICATIONS

?specialty - banking, law, mfg.

- Approximately 85% of total SIS revenues are derived from general business and utility services. The other 15% are from scientific and engineering services offered in a remote batch and interactive modes.
- Parent revenues are primarily generated by general business services with batch and interactive delivery modes. In addition, professional services revenues are derived from parent operating units.

COMPANY HIGHLIGHT/SUN INFORMATION SERVICES CO.

INDUSTRY MARKETS

- Approximately 55% of total SIS revenues were derived from financial organizations (including the Sun Financial Services operating unit), as shown below:

- Financial organizations	55%
- Manufacturing	27
Process	25
Discrete	2
- Distribution, Wholesale	11
- Government, Federal	2
- Education	1
- Transportation	1
- Utilities	1
- Other	
Extraction	2
	<u>100%</u>

- Parent revenues are mostly for financial services, process manufacturing, and wholesale distribution.

GEOGRAPHIC MARKETS

- External SIS 1976 revenues are primarily derived from the Northeast as shown below:

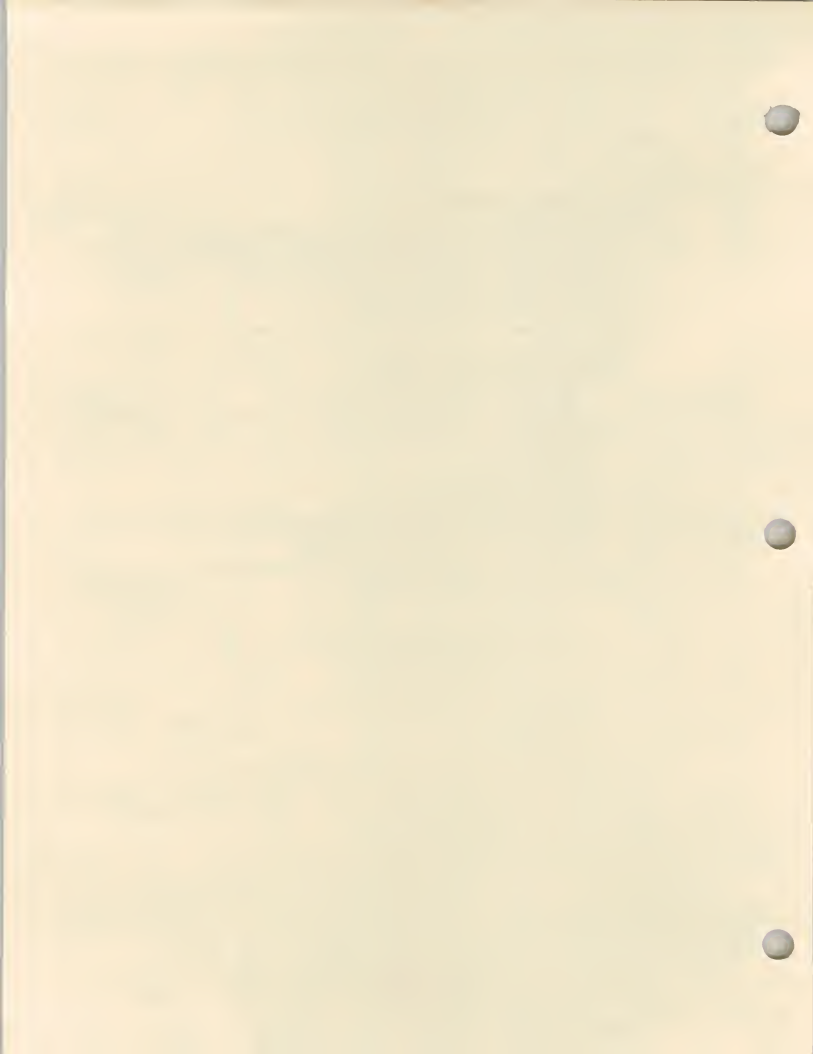
- New England	2%
- Northeast	50
- Southeast	5
- North Central	5
- Midwest	33
- Mountain	2
- Pacific Coast	2
- Canada	1
	<u>100%</u>

- Parent revenues are derived from around the world.
- SIS has offices in Dallas and Houston, TX; Miami, FL; Philadelphia and Wayne, PA; Tulsa, OK; and Washington, D.C.

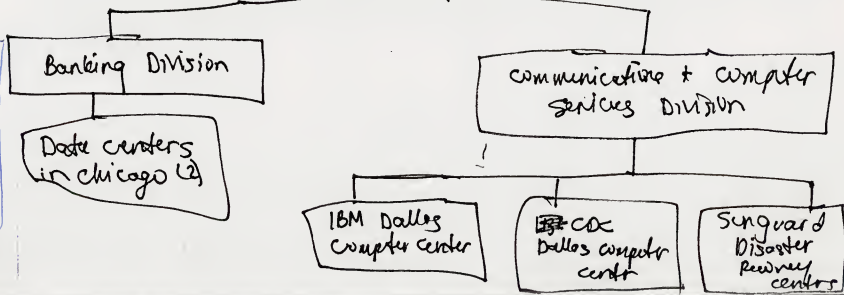
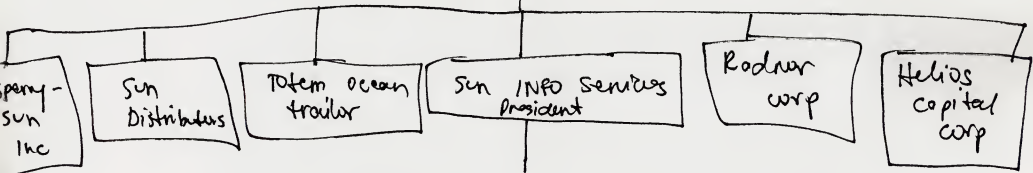
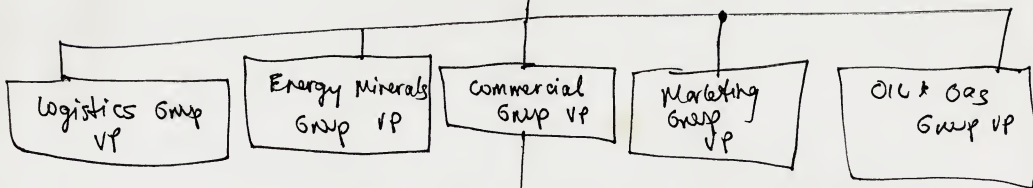
COMPANY HIGHLIGHT/SUN INFORMATION SERVICES CO.

COMPUTER HARDWARE AND SOFTWARE

- SIS has two computer centers (one IBM- and one CDC-based) in Dallas which are used to provide services. The IBM center provides general business and scientific and engineering services. The CDC center, much smaller, is mostly for scientific and engineering services including reservoir modeling applications.
- The equipment in the two centers is as follows:
 - Mainframes:
 - 1 CDC Cyber 172 under NOS/BE
 - 1 CDC 6400
 - 3 IBM 370/168 under MVS 3.7/JES2 (shared spool MP/UP configuration)
 - Communications processors:
 - 3 IBM 3705
 - 1 COMTEN 3605
 - 3 Memorex 1770
 - 1 Data 100, Model 74
 - Terminals:
 - SIS has over 400 terminals linked to the IBM center. The network extends from San Francisco to Bermuda.
- SIS clients access its services via both SIS and TYMNET networks.



SUN Company INC
TA Burtis chairman



6/5/81
From Bob Descando
- would may change again soon



① All internal Sun company Data processing done along with commercial business out of 2 Dallas centers.

② 2 Chicago centers dedicated to banking only.

③ Banking & C+CS division each have their own marketing, sales, financial, development, etc.

④ until 5/1/81 there were 3 divisions in Sun Info Services:

④ Banking Div.

⑤ Computer Services Div.

⑥ Electronics & Telecommunications Div.

EAT Division now merged with CS Division. + before the communications business

and Computer Services Div.

⑤ C+CS Division handles all Sun company VOICE & data services.

⑥ Sungard sells low priority blank tape time on their idle backup sps - mostly to govt.

⑦ In Sun company about 20% of all DP \$\$\$ are spent outside of Sun Info Services



community, according to a data-point spokesman. "It was written for the European community; they write a lot of business programs in BASIC."

code, thus increasing programmer productivity while reducing software development time and cost.

The PL/65 compiler outputs

T- PL/65 compiler is available on the SYSTEM-65 users as a pre-installed minifloppy diskette from the Electronic Devices Div. of Rockwell International.

allowing the language to be used effectively for structured programs. Other language features include: assignment, integer arithmetic, conditional execution, collective execution, linear

performance 1-chip controller microcomputer, the R6500

Cptr Exp News 9/12/78

SERVICE

Time Share Companies Offer On-Site Computers

Like the insurance salesman who changes hats and offers mutual funds to a prospect who's not interested in 30-payment life, time-sharing companies are beginning to offer on-site computers to large users.

Bill Stelma, on-site marketing manager for ADP, which offers a DEC 2020 system in addition to a time-sharing network, said there were two reasons why users might prefer a 2020 over time-sharing. "First," he said, "they have control of the hardware. Second, the cost of computing

resources is lower because it's not measured and a user gets four to 19 times as much service for the dollar that way."

"As an industry average," Stelma continued, "time-sharing services cost from \$31 to \$35 an hour, not including disk-storage charges. Depending on how an on-site computer is used, cost runs \$3.50 to \$6 an hour, including disk storage."

When asked why a user should buy time-sharing services if on-site costs are so low, Stelma replied, "Because time-sharing service is for those who have a

\$500-a-month or \$1,000-a-month service. These are clients who can't afford on-site computers, where the entry level is \$10,000 a month.

ADP makes "minor changes" to the microcode in the DEC 2020 and installs its own operating system as well as application development software. According to Stelma, "the average installation on-site takes up 150 square feet."

Since April, National CSS, a time-sharing firm based in Wilton, Conn., has been offering a large mini, the Two Pi 3200, a 32-bit machine. IBM 370-compatible for about \$200,000.

The number-one unit of what Two Pi, a wholly owned Philips subsidiary, says is the industry's first 370-compatible minicomputer, the TwoPi V32, was installed in July at National CSS's computer center in Sunnyvale, Calif. This is the machine that National CSS has chosen to call the 3200 when offering it to clients, and was installed at the center for software development, benchmarking, customer demonstrations, and what a Two Pi source described as "tire-kicking."

The V32's CPU is said to perform in the System/370 Model 138 class, and according to Two Pi, is being supplied "to OEM and other large-volume users, who will add value in the form of applications software, peripherals, and/or service, and who will supply the complete system to end-users."

Timshare, based in Cupertino, Calif., has not yet announced any plans to offer computers, but, according to spokesman

Bob Fernoy, "Plans are in the works a variety of ways to enhance our delivery of product, with minis and midis. We're looking at the DEC 2020, among other computers, and have several machines in order."

Keydata, in Wellesley, Mass., is a time-sharing company offering a series of stand-alone systems, ranging from \$40,000 to \$290,000. Prices for these packaged systems include the hardware, operating software, tailored application software, conversion and installation, and one year of system support.

These are mini-based systems, with Data General NOVA as the CPU, Contr Data printer and dual disk storage and Control Data and Hazeltine CRTs. The systems are custom-assembled by Informar of Exton, Pa.

The operating system, a Keydata source said, was specially modified to function at maximum efficiency in a large data base environment, specifically designed for and sold to distributors in only three areas: electrical, industrial supply and plumbing, heating and air-conditioning businesses.

In addition to these areas for which software has already been designed, Keydata source continued, "Special modules are being developed for a dozen other industries that will provide specific application features they require and which will make these software modules particularly attractive to those industries." The first installation of an on-site Keydata computer is scheduled for this month.

Service Calls

Timshare

CUPERTINO, CALIF.—J. Frank Leach, president and chief executive officer of Arata National Corp., was named a director of Tymshare Corp.

Sun Information

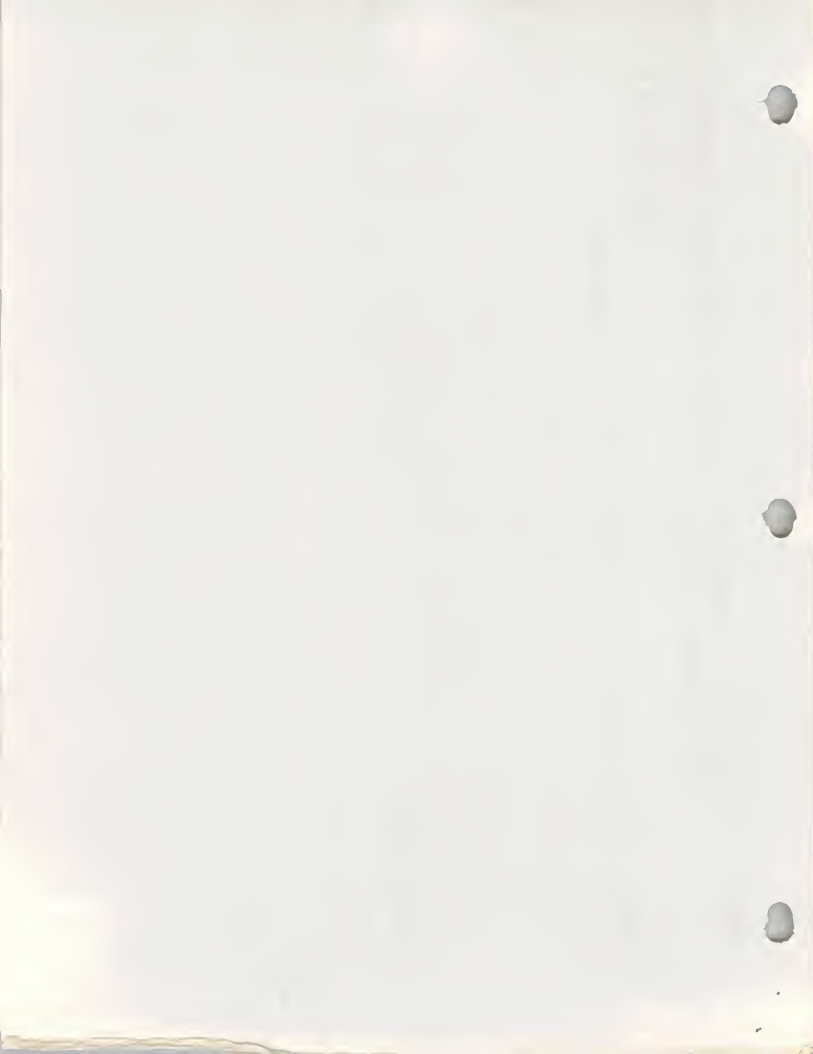
RADNOR, PA.—Sun Information Services Co., a unit of Sun Co., signed a letter of intent to acquire the Computer Div. of Metridata Computing, Inc., Louisville, Ky., for an undisclosed amount of cash.

Sun Co. said that the Metridata division, which manages data processing facilities of banks in the Chicago and Louisville areas, had 1977 revenues of \$5.4 million. Sun Co., the parent of Sun Information Services, showed 1977 revenues of \$4.743 billion.

The agreement is subject to ratification of the board and shareholders of Metridata and by the board of Sun Information.

PCC Service

LOS ANGELES—PCC Service Div., Pertec Computer Corp. (PCC), has a two-year service arrangement with Fleming Companies, Inc., a nationwide food distributor. The agreement calls for field service and maintenance at 21 Fleming locations for PCC's IBM Series 1-based order-entry system, including Sorco IQ-120 CRT terminals, FDS controller and interface units, and the Pertec 17000 tape drive. George O. Harmon, PCC vice president and general manager of the service division, said that this marks the division's first entry into servicing IBM products.



COMPANY PROFILE

SUNGARD DATA SYSTEMS INC.

1285 Drummers Lane
Wayne, PA 19087
(215) 341-8700

James L. Mann, President and CEO
Public Corporation, OTC
Total Employees: 724
Total Revenue, Fiscal Year End
12/31/87: \$91,120,000

The Company

SunGard Data Systems Inc. provides disaster recovery services, primarily to users of IBM, Tandem, DEC and compatible mainframes. The company also provides remote processing services, disaster recovery consulting, and develops, markets, and supports proprietary application software systems for the financial services industry, including shareholder accounting, employee benefit reporting, portfolio management and accounting, trust accounting, and futures and options accounting.

- SunGard was formed from a group of Sun Company, Inc. information processing subsidiaries known as Sun Information Services (SIS). These Sun businesses were sold to certain SIS management and a group of venture capitalists on January 10, 1983.
- SunGard operated as a private company (SunData Corporation) from its founding in 1976 through 1985. In March 1986 the company made an initial public offering of 2,668,000 shares of common stock. Of the shares offered, one million shares were sold by the company and 1.7 million shares were sold by certain shareholders. Net proceeds to the company of \$10 million were used to repay debt and for general corporate purposes, including working capital and expansion.
- On March 10, 1986, the name of the company was changed from SunData Corporation to SunGard Data Systems Inc.

SunGard's 1987 revenue reached \$91.1 million, a 32% increase over revenue of \$69 million for 1986. Net income increased 49% to \$8.2 million, compared with \$5.5 million in 1986. A five-year financial summary follows:

**SUNGARD DATA SYSTEMS INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	1987	1986	1985	1984	1983
Revenue	\$91,118	\$69,053	\$58,586	\$52,768	\$46,260
• Percent increase from previous year	32%	18%	(a) 11%	(a) 14%	N/A
Income (loss) before taxes and extraordinary item	\$13,876	\$10,436	\$6,570	\$3,397	\$(868)
• Percent increase from previous year	33%	59%	93%	491%	N/A
Net income (loss)	\$8,215	\$5,490	\$3,812	\$2,787	\$(868)
• Percent increase from previous year	50%	44%	37%	441%	N/A
Earnings (loss) per share	\$0.81	\$0.64	\$0.51	\$0.37	\$(0.19)
• Percent increase from previous year	27%	25%	38%	295%	N/A

(a) Includes revenue from service lines sold during 1985.

SunGard management attributes its 1987 growth in revenue to a 31% increase in sales in the disaster recovery operations and a 33% increase in revenue for the investment management systems sector. Acquired businesses accounted for 15% and 4% of growth in 1987 and 1986, respectively.

Product development expenditures were approximately \$4.9 million (2% of revenue) in 1987, \$4.6 million (4% of revenue) in 1986, and \$4.3 million (7% of revenue) in 1985.

SunGard's strategy of entering new markets and expansion through acquisition was extremely evident in 1986 and 1987 and in early 1988 as SunGard completed eight acquisitions.

- In June 1988, SunGard acquired EDP Security, Inc. based in Littleton (MA). EDP specializes in recovery planning for PC and minicomputer based relational data bases. EDP employs 25 people and has over 1,300 clients worldwide.
- In December 1987, the company acquired Minneapolis-based Eloigne Corporation, a provider of disaster recovery services with a customer base of 50.
- In December 1987, SunGard made its biggest acquisition to

date with its purchase of Devon Systems International, Inc. for \$20 million plus future contingent payments. Devon Systems provides software to large domestic and international banks for trading currency and interest rate options, futures, and swaps. SunGard estimates the potential market for these products at some 1,500 institutional trading rooms worldwide.

- Also in December 1987, SunGard purchased Uni-Coll Corporation, a Philadelphia computer service bureau, to add to SunGard's remote processing services.
- In June 1987, SunGard acquired Devlin Associates, a nationally recognized disaster planning firm. SunGard immediately merged HSH National and Devlin into one operating subsidiary called Harris Devlin Associates, Inc.
- In December 1986, SunGard acquired HSH National Management, Inc. for \$2.9 million in cash. HSH, a specialized consulting firm for disaster planning, claimed to have over 100 clients. HSH was expected to generate about \$4 million in revenue annually, as well as perhaps steering customers towards SunGard for disaster recovery services.
- In October 1986, SunGard purchased Wismer Associates, Inc. for approximately \$12 million in cash and stock. Wismer, a provider of portfolio management processing services for savings and loan associations, corporations, and governments had about 130 customers and was expected to generate about \$7 million in revenue annually.
- In May 1986, SunGard issued 36,000 shares of its common stock in a pooling-of-interests with Peachtree Financial Systems, Inc., an Atlanta-based company which markets a loan origination system to community banks.

SunGard is currently organized into nine operating groups as follows:

Disaster Recovery and Related Services.

- SunGard Recovery Services of Wayne (PA) offers disaster backup and recovery services for large-scale computer centers. The current CEO is Richard B. Aldridge.
- Harris Devlin Associates, Inc., located in Dublin (OH), is a provider of consulting and education for disaster planning. The current president is Norman L. Harris.

- SunGard Computer Services, which shares office space with SunGard Recovery Services, is a provider of remote access IBM processing services for software developers. The current President is David S. Douglas.
- SunGard Central Computer Facility, located in Philadelphia, is a provider of remote processing services for customers of SunGard Computer Services, SunGard Shareholder Systems, and SunGard Investment Systems. The current President is Michael K. Muratore.
- EDP Security, Inc. offers the DP/80 software product which guides users through risk analysis and aids them in developing a custom disaster recovery plan. Implementation and training is included with the package, and consulting is available to aid customers who have unique problems.

Investment Management Systems.

- SunGard Shareholder Systems Inc., located in San Mateo (CA), is a developer and processor of shareholder accounting systems for mutual funds, banks, and corporations. The current CEO is Dr. Phillip V. Manning.
- SunGard Investment Systems Inc., located in Hinsdale (IL), is a developer and processor of investment accounting systems for pension and benefit plans. The current President is Phillip L. Dowd.
- Wismer Associates, Inc., located in Canoga Park (CA), provides on-line portfolio management services for savings and loan associations, corporations, and governments. The current President is Dr. David A. Wismer.
- SunGard Trust Systems Inc., located in Charlotte (NC), is a provider of trust accounting and related services to banks. The current President is Kenneth R. Adams.
- Devon Systems International, Inc., located in New York (NY), is a provider of integrated trading and accounting systems for derivative instruments to international money center banks. The current President is Gregory S. Bentley.

SunGard employs a total of 724 people segmented as follows:

Disaster Recovery and Related Services:

Marketing and sales	30
Computer operations	60
General and administration	<u>40</u>
	130

Investment Management Systems	<u>594</u>
	724

SunGard's main competitor in the disaster recovery area is Comdisco. The company also competes with numerous regional disaster recovery centers, but says these companies can not compete on a national level and does not consider them a threat.

Key Products and Services

A three year summary of source of revenue, as provided by SunGard Data, follows:

**SUNGARD DATA SYSTEMS INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	1987		1986		1985	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Disaster recovery and related services	\$44.6	49%	\$34.5	50%	\$28.6	49%
Financial processing services and software	46.5	51%	34.5	50%	27.4	47%
Service lines sold	---	---	---	---	\$2.6	4%
Total	\$91.1	100%	\$69.1	100%	\$58.6	100%

Revenue from disaster recovery and related services increased by 31% in 1987 and 20% in 1986 primarily due to net increases in contracts, additional services sold to existing customers, and, to a lesser extent, price increases. Acquired businesses accounted for 12% of the disaster recovery growth in 1987.

Revenue from investment management systems increased by 33% in 1987 and 27% in 1986. Acquired businesses accounted for 18% of the growth in 1987 and 7% in 1986. The increase in revenue for investment management systems is primarily attributable to increased volumes for existing processing customers, increased revenue from investment, shareholder, and trust software systems, and the addition of new trust systems processing customers.

Descriptions of SunGard's products and services separated by operating group are as follows:

Disaster Recovery and Related Services.

- SunGard Recovery Services

- In 1987 SunGard claimed to have a 57% market share of disaster recovery services in the IBM 30XX market and only a 4% market share of the IBM 43XX market, whereas Comdisco, its main competitor, had a 37% and 58% market share in the respective markets. The average annual fees derived from a disaster recovery contract for the 30XX and the 43XX processors are \$75,000 and \$24,000, respectively.
- The company currently has approximately 500 contracts serving over 300 customers located in 35 states and Canada.
- The average contract for SunGard generates \$80,000 annually and increases at a rate of approximately 10% per year to accommodate client growth. Contracts are generally long-term (1 to 5 years). Eighty-five percent of the contracts are renewed.
- SunGard operates six data centers in Philadelphia, Chicago, and San Diego.
- In the event of a disaster SunGard charges the customer a "notification fee" of between \$25,000 and \$50,000 to configure a system similar or identical to that of the customer's and begin use of the data processing center, the customer is also charged on the basis of computer usage. The customer has available use of a "hot site" with a processor configuration similar or identical to his own. Should the customer require an extended stay (over six weeks) a "cold site" is available where computers may easily be installed and used by the customer.
- Customers may access SunGard's processors for testing their backup procedures and for actual processing in the event of

a disaster via System Network Access Points (SNAP), telecommunications centers strategically placed throughout the U.S.

- In December 1986, SunGard had its first customer disaster. Putnam Companies had a fire in their data processing center and requested SunGard's aid. The backup and recovery was successful and received favorable press in a number of publications. In 1987, four more of SunGard's customers suffered from disasters. To date SunGard has successfully aided in six disaster recoveries.
- In 1983 the Comptroller of Currency mandated that national and large commercial banks should maintain a feasible recovery plan in the event of a disaster, which led to an increase in contracts in the banking industry. Other clients include many of the largest Fortune 500 and Fortune 500 service companies.
- Harris Devlin Associates, Inc.
 - Harris Devlin consults clients in maintaining a current and viable disaster recovery plan as well as updating customer's disaster recovery plans when improvements to disaster recovery methodology becomes known.
- SunGard Computer Services.
 - This operating group is responsible for leasing excess computer time at SunGard's six data centers to software developers and to provide list enhancement services.
- SunGard Central Computer Facility.
 - This group is responsible for specialized remote processing problems for customers of SunGard Computer Services, SunGard Shareholder Systems, and SunGard Investment Systems.

Investment Management Systems.

- SunGard Shareholder Systems Inc.
 - Formerly Applied Financial Systems, SunGard Shareholder Systems offers two main products for shareholder accounting. Both products are available for in-house installation, or may be accessed through SunGard's remote data centers.

- INVESTAR™ is a shareholder accounting system that supports the following funds: money market funds, tax free funds, equity or bond funds, series type funds, institutional funds with 12B-1 features, unit investment funds, closed end funds. Some of the important features of INVESTAR include: automated Letter of Intent, and Rights of Accumulation accounting; on-line inquiry for responding to shareholder questions; prospect tracking, and customer retention analysis; daily and periodic management reporting; performance statistics regarding transaction processing; interface to debit/credit card networks and services; year-end tax reporting; real-time inquiry reporting on all customer account information; periodic processing of fund-triggered activities; interfaces to automated clearing houses, Fed Wire and Bank Wire, automated teller machines. INVESTAR runs on IBM 434X, 303X, 308X, and compatible mainframes under MVS using IMS DB/DC and COBOL.
- SUNSTAR™ is an on-line shareholder accounting system that will perform reporting and recordkeeping functions for stock and bond issues based on a common investor data base. SUNSTAR runs on IBM 434X, 303X, 308X, and compatible mainframes under MVS using IMS DB/DC and COBOL.
- SunGard Investment Systems Inc.
 - The Employee Benefit Reporting System (EMBERS®) is a family of individual systems that shares a common data base and file building technique. When licensed as a software package, the EMBERS family sells for approximately \$150,000. there are currently 20 installations. Components of EMBERS are:
 - EMBERS/FSR (Financial Statement Reporting) produces accounting and investment performance reports, including consolidated reports for master trusts.
 - EMBERS/PAR (Plan Allocation Reporting) provides plan allocation schedules for items such as trade dating, income accrual, and multiple fund/plan relationships.
 - EMBERS/CFR (Collective Fund Reporting) is a support system that will maintain collective fund portfolios and provide unit valuations.
 - EMBERS/IPM (Investment Performance Measurement)

is a comprehensive performance measurement system that includes trade date performance and income accruals for trust portfolios.

- EMBERS/INC (Income Review and Reconciliation) provides distribution of interest and dividend income to trust clients. It computes asset positions of record and amount of income expected, then matches them against income posted, providing an audit trail for further research if needed.
- FUND ONE^R is an on-line portfolio accounting system that tracks investment transactions for bank commingled funds, such as sales and purchases of investments, commission payments, and dividend, interest, and capital gain distributions. FUND ONE licenses for approximately \$100,000 and runs on IBM and compatible mainframes under OS/MFT, OS/MVT, OS/VS1 and DOS/VS, SVS, MVS, or VM and uses CICS as the teleprocessing monitor. FUND ONE has 25 installations to date. FUND ONE is also available as a remote processing service.
- PERF 4TM is a fourth-generation performance measurement system that measures the rate of return achieved by an investment manager and other pertinent investment performance information. PERF 4 licenses for about \$120,000 and has 20 in-house installations. PERF 4 runs on IBM 43XX series mainframes and targets the IBM PC for downloading of data.
- PLAN ONE is an employee benefit participant accounting system that will track the individual employees' accounts in any defined contribution plan. PLAN ONE licenses for \$350,000 and runs on IBM and compatible mainframes. There are currently six installations of PLAN ONE.
- MUTUAL FUND ONE is an on-line, real-time mutual fund portfolio accounting system with integrated general ledger functions. MUTUAL FUND ONE is available as a remote processing service or as an in-house software package. The package runs on IBM 30XX, 4300 series and compatible processors under MVS, VM, XA, and uses CICS as the teleprocessing monitor. The remote service is designed to communicate with IBM 3270 or equivalent terminals. The software package licenses for \$200,000. There are currently 12 installations.
- Wismer Associates, Inc.

- SERIES 2™ is a portfolio management processing service designed for financial institutions.
- MONEYMAX® is a portfolio management processing service designed for the public sector.
- SunGard Trust Systems Inc.
 - AUTO-TRUST/AT, is a remote batch personal trust accounting system. The service is accessed via IBM terminals installed at trust departments. Features of AUTO-TRUST include: complete common trust fund accounting, pricing for all listed stocks and corporate and municipal bonds, automatic posting of security purchases to suspend accounts for payment versus delivery, collateral requirements reporting, complete tax lot accounting, federal and state tax ledgers, regulatory reports for FDIC and the Comptroller of Currency, and money market fund investments.
 - Autofax/PR, is a processing service that provides accounting and participant record keeping functions for the following types of employee benefit plans: profit sharing, money purchase pension, HR 10 (single or master), ESOPS, TRASOPS, multiple investment, integrated plans, and thrift plans.
 - AutoTrans is a remote batch processing service that provides control of shareholder/bondholder recordkeeping. A full listing of shareholders/bondholders, including certificate numbers and number of shares or face value held, can be maintained. As transfers take place, old certificates are cancelled and new certificates issued.
 - AutoPay is a remote batch service that provides trust departments with complete production capability for periodic and nonperiodic payments from savings plans, pension or profit sharing plans, and annuities. Included in the system are up to eight withholding elections, choice of remittance types, complete file maintenance capability, and alternate addresses, as well as a variety of payment options.
 - AutoSave is an IRA, CD, and savings recordkeeping and reporting system designed for IBM Series 36 computers.
 - Microtrust is a PC-based, on-line, real-time, menu-driven software package for trust accounting. Features of the system include applications for administrative functions,

investment, and tax accounting. Microtrust software is priced at \$6,000.

- MicroTrans is a software package for stock and bond recordkeeping and transfer applications.
- Autofax/MPR is a standalone participant reporting system for employee benefits administration.
- Devon Systems International, Inc.
 - EMS Base Module is the system core of the Exposure Management System, it incorporates processing capabilities for exchange-traded options and futures, a report writer, and a daily general ledger.
 - EMS/OPT is an options pricing toolkit providing multiple analysis models to manage exposure in the currency and commodities options markets. EMS/OPT also has the ability to access historical price and volatility data bases to be used directly in the analysis.
 - EMS/IRP, or Interest Rate Protection Tools, provides pricing and management analysis support for managing exposures to money market rates.
 - EMS/FxP, or Foreign Exchange Trading Supplement, particularizes EMS to foreign exchange business by providing multi-currency capabilities and pricing, back office and accounting support specific to the foreign exchange market. EMS/FxP allows general ledger entries to be passed for interbank trades on either a single, dual or multi-currency basis, and maintains a comprehensive library of credit line formulas. EMS/FxP produces confirmations of trades using, user-defined texts in English, German or French.
 - EMS/UA, or the User Authorization Module, provides an audit trail of transactions processed and allows managers the ability to limit access to the system.
 - EMS/DF, or the Hedge Accounting Module, Allows EMS to maintain records of deferred gains and losses, and evaluate the effectiveness of hedges to be evaluated through a summary comparison.
 - EMS/FCM, or the Brokerage Module, supports the back-office, customer reporting and accounting

processing requirements of brokerage activities. EMS features same day generation of confirmations and statements, as well as real-time "Equity Watch" functions which monitor the clients position, margin and equity standing. Clients wishing to be placed on "explicit only" liquidation status can be designated as such.

- The EMS system runs on the following processors: IBM 43XX, 308X, 303X under VM/CMS or MVS/TSO, MicroVAX 3XXX or larger under VMS, IBM PS/2 Model 80-111 with Quarterdeck QEMM/386, and Compaq 386/20.

Industry Markets

Approximately 70% of SunGard's 1987 revenue was derived from the banking and finance industry. The remainder of revenue comes from clients in insurance, manufacturing, distribution, and utilities.

Geographic Markets

INPUT estimates approximately 95% of SunGard's 1987 revenue was derived from the U.S. and 5% from Canada.

SunGard divisions and subsidiaries are located as follows:

- | | |
|-------------------------------------|------------------|
| • SunGard Recovery Services | Wayne, PA |
| • Harris Devlin Associates, Inc. | Dublin, OH |
| • SunGard Computer Services | Wayne, PA |
| • SunGard Central Computer Facility | Philadelphia, PA |
| • SunGard Investment Systems Inc. | Hinsdale, IL |
| • SunGard Shareholder Systems Inc. | San Mateo, CA |
| • SunGard Trust Systems Inc. | Charlotte, NC |
| • Devon Systems International, Inc. | New York, NY |
| • Wismer Associates, Inc. | Canoga Park, CA |

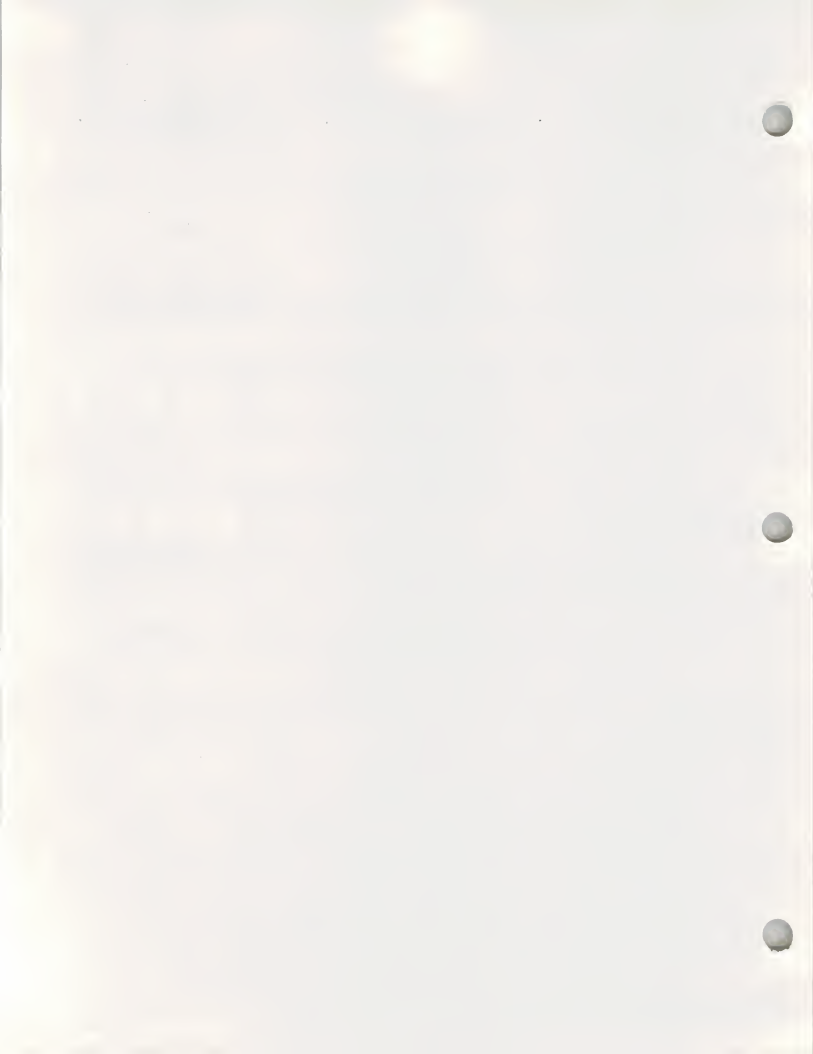
**Computer
Hardware and
Software**

SunGard currently operates data centers in Philadelphia, Chicago, and San Diego, consisting of six hot sites and five cold sites, as follows:

- Philadelphia has three hot sites and two cold sites operating on the following processors:
 - 1 DEC VAX 8800.
 - 1 Tandem PXP.
 - 1 IBM 3090 400 E.
 - 1 IBM 3081 GX.
 - The company plans to add an IBM 3090 200 E in October 1988.

- Chicago has two hot sites and two cold sites operating on the following processors:
 - 1 Tandem VLX.
 - 1 IBM 3090 200 E.
 - 1 IBM 3081 G.
 - The company plans to add an IBM 3090 400 E in the fourth quarter of 1988.

- San Diego has one hot site and one cold site operating on the following processors:
 - 1 IBM 3081 K.
 - The company plans to add an IBM 3090 200 E in the first quarter of 1989.



COMPANY PROFILE

SUNGARD DATA SYSTEMS INC.
Two Glenhardie Corporate Center
1285 Drummers Lane
Wayne, PA 19087
(215) 341-8700

John M. Ryan, Chairman
James L. Mann, President
Public Corporation, OTC
Total Employees: 437
Total Revenue, Fiscal Year End
12/31/85: \$58,586,000

THE COMPANY

- SunGard Data Systems Inc. provides disaster recovery services, primarily to users of large IBM and compatible mainframes. The company also provides processing services and software products for shareholder, investment, and trust accounting applications to the financial services industry and utility processing primarily to software development firms.
- SunGard Data was formed from a group of Sun Company, Inc. information processing subsidiaries known as Sun Information Services (SIS). These Sun businesses were sold to certain SIS management and a group of venture capitalists on January 10, 1983.
- SunGard Data operated as a private company (SunData Corporation) through 1985. In March 1986 the company made an initial public offering of 2,668,000 shares of common stock. Of the shares offered, one million shares were sold by the company and 1,668,000 shares were sold by certain shareholders. Net proceeds to the company of \$10 million were used to repay debt and for general corporate purposes, including working capital and expansion.
- On March 10, 1986, the name of the company was changed from SunData Corporation to SunGard Data Systems Inc.
- SunGard Data's 1985 revenue reached \$58.6 million, an 11% increase over \$52.8 million for 1984. Revenue from continuing operations increased 23% from \$45.5 million in 1984 to \$56 million in 1985. Net income reached \$3.8 million, compared to \$2.8 million for 1984. A three-year financial summary follows:

SUNGARD DATA SYSTEMS INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1985	1984	1983
Revenue (a)	\$ 58,586	\$ 52,768	\$ 46,260
• Percent increase from previous year	11%	14%	N/A
Income (loss) before taxes and extraordinary item	\$ 6,943	\$ 3,485	\$ (868)
• Percent increase from previous year	99%	501%	N/A
Net income (loss)	\$ 3,812	\$ 2,787	\$ (868)
• Percent increase from previous year	37%	421%	N/A
Earnings (loss) per share	\$ 0.51	\$ 0.37	\$ (0.19)
• Percent increase from previous year	38%	295%	N/A

(a) Includes revenue from service lines sold during 1985.

- Recent business areas divested by SunGard Data include the following:
 - In January 1985 SunGard Data sold its Dallas-based IBM and CYBER non-proprietary processing services line, supported under contract at Sun Company's computer centers in Dallas and Richardson (TX), to UCCEL Corporation.
 - In March 1985 SunGard Data sold its project management systems processing service line to K & HProject Systems Inc.
 - As a result of these sales, SunGard Data received cash and notes of \$507,000 at closing and \$2,044,000 in additional payments through 1985.

SUNGARD DATA SYSTEMS INC.

- A three-year summary of source of revenue, as provided by SunGard Data, follows:

SUNGARD DATA SYSTEMS INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ thousands)

FISCAL YEAR ITEM	1985		1984		1983	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Disaster recovery and related services	\$28,605	49%	\$19,854	38%	\$13,929	30%
Financial processing services and software	27,355	47	25,654	48	21,734	47
Service lines sold	2,626	4	7,260	14	10,597	23
Total	\$58,586	100%	\$52,768	100%	\$46,260	100%

- Revenue from disaster recovery and related services increased by 43% in 1984 and 44% in 1985 primarily as a result of the addition of new customers, expansion of services offered to existing customers, increases in the volume of related services, and, to a lesser extent, price increases.
- Revenue growth from financial processing services and software increased 18% in 1984, but slowed to 7% in 1985. Increases in the processing volumes of existing customers and the addition of new customers in both investment and trust accounting systems were partially offset by a decline in shareholder accounting processing services and software license fees. This decline was due primarily to a delay in completing the company's new stock, bond, and mutual fund shareholder accounting systems (SUNSTAR AND INVESTAR).
- Product development expenditures were approximately \$4.3 million in 1985, \$3.3 million in 1984, and \$2.3 million in 1983, of which \$0.8 million, \$1.1 million, and \$0.5 million, respectively, was funded by SunGard Data customers.
- SunGard Data is currently organized into four subsidiaries that function as separate operating groups.

- Sungard Services Company, headquartered in Wayne (PA), provides disaster recovery and related remote computing (utility) services.
- Applied Financial Systems, Inc. (AFS), headquartered in San Mateo (CA), provides shareholder accounting processing services and application software products.
- Catalallactics Corporation, headquartered in Hinsdale (IL), provides investment accounting processing services and application software products.
- NMF, Inc., headquartered in Charlotte (NC), provides trust accounting processing services and application software products.
- Revenue for the six months ending June 30, 1986 was approximately \$32.2 million, a 13% increase over \$28.6 million for the same period in 1985. Net income reached \$2.9 million, compared to \$1.8 million for the same period a year ago.
- As of December 31, 1985, SunGard Data had 437 full-time employees, segmented as follows:

Marketing/sales	62
Customer service/technical support/operations	250
Software development	63
General and administrative	<u>62</u>
	437

- Major competitors by functional area include the following:
 - Disaster recovery services: Comdisco, Inc.
 - Mutual funds processing: DST Systems, Inc., Bank of New York, First National Bank of Boston, and Mellon National Bank.
 - Shareholder accounting software (stocks and bonds): Stockholder Systems, Inc.
 - Investment accounting processing and software: SEI Corporation and National FSI Inc.
 - Trust accounting processing and software: National Computer Systems and SEI Corporation.

KEY PRODUCTS AND SERVICES

- SunGard Data's 1985 revenue was derived approximately as follows (\$ millions):

SUNGARD DATA SYSTEMS INC.

	<u>Revenue</u>	<u>Percent of Total</u>
Continuing operations		
• Processing services		
- Financial processing	\$ 21.6	37%
- Disaster recovery	21.5	37
- Utility processing	7.1	12
• Software products	<u>5.8</u>	<u>10</u>
Subtotal	\$56.0	96%
Discontinued operations		
• Processing services	\$ <u>2.6</u>	<u>4%</u>
Total	\$ 58.6	100%

- Sungard Services Company markets the company's disaster recovery services, under the name SUNGARD® Recovery Services, primarily to users of large IBM and IBM-compatible mainframe computers. The company also has recently installed Tandem computers at its Philadelphia data center for customers that are wholly or partially dependent on Tandem systems.
 - The company currently has 325 SUNGARD contracts with 280 customers located in 35 states and Canada.
 - Disaster recovery clients include 24 of the 100 largest U.S. industrial corporations, 30 of the 100 largest U.S. commercial banks, 11 of the 50 largest U.S. life insurance companies, and 10 of the 50 largest U.S. public utilities.
 - Contractual list rates per mainframe system currently range from \$3,500 to \$9,000 per month, and the terms of these contracts generally range from one to five years.
 - During 1985 the company's average monthly revenue per SUNGARD contract was approximately \$6,000.
 - Sungard Services operates disaster recovery centers in Philadelphia and Norbrook. The company plans to open a center in San Diego in October 1986 with an IBM 3081K.
 - In order to generate incremental revenue from its disaster recovery equipment when it is not being used for tests or other disaster recovery activities, Sungard makes limited use of two mainframes at the Philadelphia data center to provide remote access processing services primarily to software development companies located in the north-eastern U.S.
- Applied Financial Systems, Inc. (AFS) provides processing services and software products for on-line shareholder recordkeeping and reporting for

stocks, bonds, and mutual fund shares. Designed for use on large IBM and compatible mainframes, these systems facilitate daily updating of investor data, provide continuous access to that data, and generate required periodic reports to investors and government tax and regulatory agencies.

- The primary target market for AFS products and services includes the 300 largest bank transfer agents and the 50 largest mutual fund managers.
- Systems currently offered by AFS as a processing service or application software product (with license fees ranging from \$150,000 to \$500,000 per system) include the following:
 - Investor Processing System (IPS) offers shareholder record-keeping and stock transfer processing for banks and corporations acting as their own transfer agents. IPS is offered as a processing service or as a software package for in-house use.
 - The Automated Bond System (TABS) is a software package that provides bond and coupon information processing, accounting, and reporting for bearer and registered bonds.
 - The Mutual Fund Processing System (MSP) is an accounting, transfer, and reporting system for fund management groups, investment brokers, and transfer agencies. It tracks shares, calculates daily dividends, and issues shareholder statements. It does master/sub, KEOGH/IRA, and year-end accounting and reporting, and is capable of producing the following reports: sales, escheatable accounts, proxy, blue sky, SEC, IRS, and state tax withholdings.
- Systems currently under development include the following:
 - SUNSTAR is an on-line shareholder accounting system that will perform reporting and recordkeeping functions for stock and bond issues based on a common investor data base. This system is intended to replace IPS and TABS and is scheduled for completion in 1986. It is anticipated SUNSTAR will license for \$500,000.
 - INVESTAR is an on-line shareholder accounting system that will perform reporting and recordkeeping functions, based on a common investor data base, for families of mutual funds including load funds, no-load funds, and money market funds. This system is intended to replace MPS, the company's current mutual fund shareholder accounting system. Development of INVESTAR began in 1983 and was originally scheduled for completion in 1985. Due to the complexity of the system, changes in design structure, and other development delays, the system is not expected to be completed until early 1987. It is

anticipated INVESTAR will license for approximately \$1.2 million.

- AFS currently has 44 contracts with 35 shareholder accounting customers, of which 22 customers are purchasing remote processing services.
 - Processing is provided from the company's computer center in Philadelphia which has two IBM mainframes dedicated to its shareholder accounting customers. These customers currently service approximately 4 million stock and bond accounts and 2.3 million mutual fund accounts.
 - During 1985, monthly stock and bond processing fees averaged approximately \$29,000 per customer and mutual fund processing fees averaged approximately \$64,000 per customer.
- Catalallactics Corporation provides investment management processing and software products primarily to larger banks and fund managers for investment performance measurement, investment fund accounting, and client reporting. The systems are designed for use on large IBM and compatible mainframes.
 - The target market for Catalallactics products and services includes those bank trust departments which manage trust assets exceeding \$800 million.
 - The nucleus of Catalallactics' reporting systems is the Employee Benefit Reporting System (EMBERS®). EMBERS is a family of individual systems that shares a common data base and file-building technique. When licensed as a software package, the EMBERS family sells for \$125,000. Components of EMBERS are:
 - EMBERS/FSR (Financial Statement Reporting) produces accounting and investment performance reports, including consolidated reports for master trusts.
 - EMBERS/PAR (Plan Allocation Reporting) provides plan allocation schedules for items such as trade dating, income accrual, and multiple fund/plan relationships.
 - EMBERS/IPM is a comprehensive investment performance measurement system that includes trade date performance and income accruals for trust portfolios.
 - EMBERS/INC (Income Review and Reconciliation) provides distribution of interest and dividend income to trust clients. It computes asset positions of record and the amount of income expected, then matches them against income posted, providing an audit trail for further research if needed.

- Other products and processing services currently marketed by Catalactics include the following:
 - PERF4^{T.M.} is a performance measurement system that measures the rate of return achieved by an investment manager and other pertinent investment performance information. PERF4 licenses for \$120,000.
 - FUND ONE[®] is a portfolio accounting system that tracks investment transactions for bank commingled funds, such as sales and purchases of investments, commission payments, and dividend, interest, and capital gain distributions. FUND ONE licenses for \$95,000.
- Systems under development include:
 - PLAN ONE, an employee benefit participant accounting system that will track the individual employees' accounts in complex defined contribution pension plans, is scheduled for completion during 1986. PLAN ONE will license for approximately \$350,000.
 - MUTUAL FUND ONE^{T.M.}, a portfolio accounting system that will track investment transaction for mutual funds, is scheduled for completion during 1986. MUTUAL FUND ONE will license for approximately \$200,000.
- Catalactics currently has 34 contracts with 24 large bank trust departments, of which 16 customers are purchasing remote processing services.
 - Processing is provided from a large IBM mainframe computer center in Chicago which is operated by a third-party vendor.
 - During 1985 monthly investment accounting processing fees averaged \$22,000 per customer.
- Catalactics also designs and develops custom investment accounting systems for large bank trust departments, usually by designing custom enhancements to existing SunGard Data-owned software or developing new application software for which SunGard Data retains exclusive marketing rights.
- NMF, Inc. provides processing services and application software products for trust accounting, employee benefit servicing, and stock and bond servicing to small and midsize bank trust departments. NMF believes it is the leading provider of trust accounting processing and software to bank trust departments that manage up to \$150 million in trust assets.

- AUTO-TRUST/AT, introduced in December 1984, is a remote batch personal trust accounting system. The service is offered with a micro-computer installed in trust departments. Features of AUTO-TRUST include:
 - Complete common trust fund accounting.
 - Pricing for all listed stocks and corporate and municipal bonds.
 - Automatic posting of security purchases to suspend accounts for payment versus delivery.
 - Collateral requirements reporting.
 - Complete tax lot accounting.
 - Federal and state tax ledgers.
 - Regulatory reports for FDIC and the Comptroller of Currency.
 - Money market fund investments.
- AutofaxSM /PR, formerly called the Participant Accounting System (PACS), is a processing service that provides accounting and participant recordkeeping functions for the following types of employee benefit plans:
 - Profit sharing.
 - Money purchase pension.
 - HR10 (single or master plans).
 - ESOPS.
 - TRASOPS.
 - Multiple investment.
 - Integrated plans.
 - Thrift plans.
- AutoTrans, formerly called the NMF Stock/Registered Bond Transfer System, is a remote batch processing service that provides complete control of shareholder/bondholder recordkeeping. A full listing of shareholders/bondholders, including certificate numbers and number of shares or face value held, can be maintained. As transfers take place, old certificates are cancelled and new certificates issued.
- AutoPay, formerly called the NMF Pension Payment System, is a remote batch service that provides trust departments with complete production capability for periodic and nonperiodic payments from savings plans, pension or profit sharing plans, and annuities. Included in the system are up to eight withholding elections, choice of remittance types, complete file maintenance capability, and alternate addresses, as well as a variety of payment options.
- AutoSave is an IRA, CD, and savings recordkeeping and reporting system designed for IBM Series 36 computers.
- Software products marketed by NMF for IBM microcomputers include the following:

- Microtrust is a real-time, on-line, menu-driven software package for trust accounting. Features of the system include applications for administrative functions, investment, and tax accounting. Price of the Microtrust software is \$6,000.
- MicroTrans is a software package for stock and bond record-keeping and transfer applications.
- Autofax/MPR is a standalone participant reporting system for employee benefits administration.
- NMF currently has approximately 735 contracts with 550 small and midsize bank trust customers located in 48 states. This includes approximately 450 remote processing customers supported by a NAS computer installed at the company's data center in Charlotte. During 1985, monthly processing fees averaged \$1,000 per customer.

INDUSTRY MARKETS

- Approximately 70% of SunGard Data's 1985 revenue was derived from the banking and finance industry. The remainder of revenue comes from clients in manufacturing, insurance, utilities, distribution, and transportation.
- Revenue from processing services provided to Sun Company was approximately \$227,000, \$1.1 million, and \$1.8 million for 1985, 1984, and 1983, respectively. Fees for processing services purchased from Sun were approximately \$1.8 million, \$5.1 million, and \$3.9 million for 1985, 1984, and 1983, respectively.

GEOGRAPHIC MARKETS

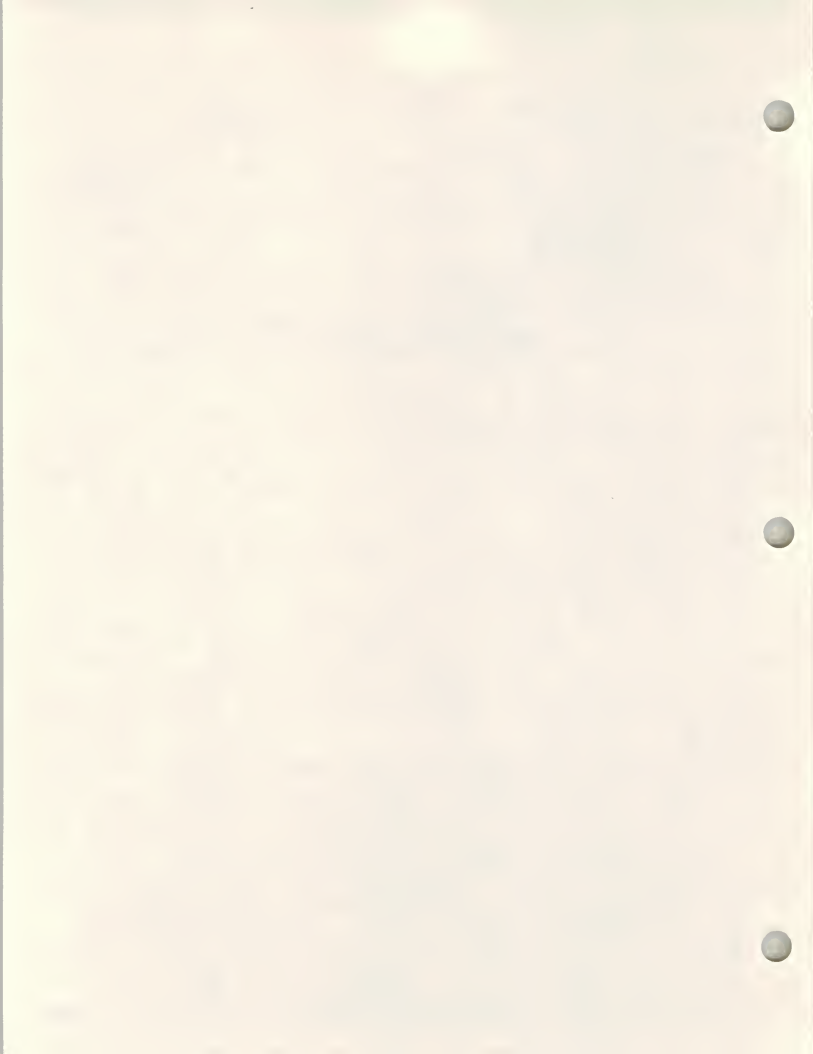
- INPUT estimates approximately 95% of 1985 revenue was derived from the U.S. The remaining 5% was derived from Canada.
- SunGard Data subsidiary offices are located in Wayne (PA), San Mateo (CA), Hinsdale (IL), and Charlotte (NC). Additional sales offices are located in New York City, Chicago, Atlanta, Dallas, and Los Angeles.

COMPUTER HARDWARE AND SOFTWARE

- SunGard Data owns three data centers. Hardware and services provided at these centers are as follows:
 - Charlotte (NC) (NMF, Inc. trust processing services).
 - I NAS, MVS.

SUNGARD DATA SYSTEMS INC.

- Northbrook (IL) (Sungard disaster recovery services).
 - . 1 IBM 3081K.
 - . 1 IBM 3033.
 - . SunGard Data plans to upgrade the IBM 3033 to an IBM 3083 in 1987.
- Philadelphia (Sungard disaster recovery services/AFS shareholder processing).
 - . 1 IBM 3081G.
 - . 1 IBM 3033.
 - . 1 IBM 3081 KX.
 - . 3 Tandem NonStops (2 and 3 TXP configurations).
 - . SunGard Data plans to upgrade its IBM 3033 to an IBM 3083 in late 1986, and its IBM 3081KX to an IBM 3090/200 in late 1986.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

July 1996

SupplyTech, Inc.

CEO: Ted Annis
President: Gail Jackson
1000 Campus Drive
Ann Arbor, MI 48104-6700
Phone: (313) 998-4000
Fax: (313) 998-4099



Status: Private
Employees: 175 (6/96)
Revenue: \$17,000,000
Fiscal Year End: 12/31/95

Key Points

- SupplyTech has one of the largest installed bases of EDI software users, with more than 17,000 installations worldwide, making it one of the most successful EDI companies today. SupplyTech's client base includes virtually all types of businesses and industries, such as automotive, transportation, health care, the U.S. government, the Canadian government, and many others.
- SupplyTech has expanded its operations internationally with affiliates in Mexico,

Italy, Australia, and the U.K., and value-added resellers in 24 countries worldwide.

- SupplyTech now offers AS/400 EDI software and plans to introduce Windows NT and UNIX versions of its STX EDI software during 1996 and 1997.

Company Description

Founded in 1984, SupplyTech, Inc. is a leading supplier of EDI and Electronic Commerce solutions, with an extensive network of offices and VARs (value-added resellers) around the world. The company provides comprehensive EDI consulting and implementation services, as well as flexible, standards-based EDI software.

SupplyTech's key product offerings include: STX® EDI translation software, STMAP® and

STFORMS® mapping integration software, and STBAR® bar code labeling software.

SupplyTech has the following industry relationships:

- Former Vice Chairperson of ANSI ASC X12
- Member of X12 Steering Committee
- Former member of DISA Board of Directors
- Member of the international EDIFACT SDG (Syntax Development Group)
- Participation in various industry groups, including AIAG, EIDX, VICS, TALC, MOTOR, AIA, CIDX, TCIF, and IBCA

Operations/Structure

SupplyTech, Inc. is headquartered in Ann Arbor (MI). The company affiliates are in Mexico (SupplyTech de Mexico, S.A. de C.V., Mexico City), Italy (SupplyTech International S.r.L.), Australia (SupplyTech Australia), and the U.K. (SupplyTech U.K.).

Company Strategy

SupplyTech's strategy is to provide EDI products with multilingual capabilities for industry and government use worldwide.

The company plans to expand the availability of its EDI products to Windows NT and UNIX environments in 1996 and 1997. Expanded mapping features are also planned for these products.

SupplyTech's marketing strategy includes direct sales and support in North America, Europe, Australia, and Mexico, with the rest of the world serviced by qualified value-added resellers (VARs).

Financials

SupplyTech's 1995 revenue reached \$17 million, a 26% increase over 1994 revenue of \$13.5 million. A five-year revenue summary follows:

**SupplyTech, Inc.
Five-Year Revenue Summary**
(\$ Millions)

Item	Fiscal Year				
	1995	1994	1993	1992	1991
Revenue	\$17.0	\$13.5	\$12.4	\$10.0	\$8.4
• Percent change from previous year	26%	9%	24%	19%	11%

SupplyTech is profitable and well-balanced financially, and has no outside or venture-capital investment. An unused \$2 million line of credit is maintained at a local bank.

Market Financials

SupplyTech's customer base ranges from very small to very large companies. Its EDI

software is used in more than 20 industries, including retail, automotive, aerospace, chemical, computer, electronics, import/export, textile, food service, agriculture, Canadian and U.S. governments, education, and health care.

Approximately 25% of the standards-based EDI users in the U.S.' automotive and retail industries use SupplyTech's EDI software.

Geographic Markets

Approximately 80% of SupplyTech's 1995 revenue was derived from the U.S., 10% from Canada and Mexico, and 10% from Europe, South America, and the Pacific Rim.

SupplyTech has customers in over 26 countries, including the U.S., Canada, Mexico, France, Belgium, the U.K., Israel, Colombia, China, Australia, and Japan.

Employees

SupplyTech currently has 175 employees, and 17 contractors (11 in research and development, 3 in Customer Service, 2 in Services, and 1 in technical support), segmented as follows:

Services.....	6
Sales and marketing	66
Research and development	40
Customer support.....	50
General and administrative.....	<u>13</u>
	175

Key Products and Services

STX® Translation Software

STX translation software products are powerful electronic data interchange (EDI) applications that support the electronic exchange of business transactions. These software packages offer communications, message processing, mapping, translation, and administration capabilities.

- STX translation software runs on multiple platforms, including DOS, Windows®, DOS/VSE, MVS®, and AS/400® environments.

- STX EDI translation software handles all EDI standards, including ANSI X12, TDCC, and EDIFACT transactions. STX also supports all cross-industry standards such as VICS, UCS, AIAG, TALC, and CIDEK.
- The STX software is menu driven and provides complete data entry screens and input editing capability for all standard UCC-based transactions.
- An external file interface is available to move data between STX and any other application programs, including bar code label generation and scanning.
- STX translation software also offers the following features:
 - An administration system that handles backup, recovery, retransmission of transactions, generation of Functional and Interchange Acknowledgments, and trading partner record creation
 - Management reporting capabilities
 - Database browsing
 - Flexible data entry capabilities via the keyboard or bar code scanning equipment
 - Advanced mapping capabilities
 - Automatic operations to perform EDI without operator intervention
- STX operates as a standalone workstation or integrated with an application.
- STX for the Mainframe EDI, announced in 1995, is available for IBM mainframes, providing batch EDI capabilities and the following features:
 - Allows the user to send a transaction to the application and have it returned

while the process is on-line, in batch operation

- Standard script language for all main batch processes and CICS
- Multiple EDI dictionaries that may be reviewed and updated on-line
- STX for Windows, released in 1995, offers the following features:
 - Point and click graphical user interface
 - Multilingual menus
 - Libraries of communications log-ons and predefined EDI transactions to reduce implementation time
 - STFORMS® Forms Overlay Generator, announced in May 1995, is a software mapping tool for integration with STX for Windows.
- This development tool is used to customize formats for data entry and printing, providing a data entry/translation engine and Overlay technology.
- STFORMS allows formats to be created that customize the way in which data is entered at the keyboard, as well as how it is presented on-screen and on printed documents.
- Availability of STX for UNIX is expected in 1996, and STX for Windows NT in 1997.

STMAP® Mapping Software

STMAP for Windows, released in May 1995, is a mapping/translation software tool for integrating EDI with a company's internal applications. It allows the user to create mapping definitions and perform translations between the company's application files and its trading partners' EDI documents.

- STMAP is compatible with DOS, Windows®, UNIX®, and MVS® environments.
- STMAP offers advanced capabilities for managing the translation process and performs compliance requirements. When items are rejected, STMAP routes them to a file where they can be processed off-line.
- Additional features include flow diagramming, loop processing, and the ability to designate a list of actions to be taken when a specific EDI segment or element is translated.
- STMAP supports the major EDI and transaction standards in addition to allowing the user to translate maps to and from proprietary formats.
- STMAP accepts and outputs application files in several formats (ASCII sequential, delimited, or xBase) without requiring file conversion.
- STMAP consists of two components: the STMAP user interface, which allows users to develop maps, and the STMAP translation engine, which translates EDI data and application files according to the rules of those maps.
- STMAP for the Mainframe is designed for implementing EDI on legacy systems.

STBAR® Bar Code Labeling Software

STBAR is SupplyTech's bar code labeling software product for the IBM and compatible microcomputers running MS DOS and Windows.

- STBAR is a flexible software package that allows the user to design, manage, and print bar code labels. When integrated with EDI systems, bar code labeling

software extends the functionality and efficiency of order processing, inventory, warehousing, and shipping systems.

- STBAR's client/server architecture allows it to operate as a standalone or multi-user system.
- STBAR prints bar code labels in a wide variety of industry standard label formats, including: AIAG, LOGMARS, HIBC, Primary Metals, Telecommunications, and Retail. It supports all standard bar code symbologies, including: Code 3 of 9, Code 128 - Subset B, Code 128 - Subset C, UPC-A, EAN 8, EAN 13, and Interleaved 2 of 5.
- STBAR supports a wide range of bar code printers, including: Intermec®, HP Laserjet®, Zebra®, Monarch®, Sato®, and Printronix® with IGP® Interface.
- Availability of STBAR for Windows NT is expected in 1997.

EDI Implementation Services

SupplyTech's EDI Implementation Services Department, formed in 1994, offers hub implementation services, EDI integration, EDI document mapping, map development, implementation guide preparation, seminars, and training.

- The Implementation Services Department provides experienced EDI roll-out teams for project planning, design, and complete hub implementation management services.
- SupplyTech can assist a hub in identifying the data required to implement ANSI X12 and EDIFACT EDI standards, then map documents to the EDI standards for successful implementation.

- SupplyTech's EDI Implementation Guide was created to define the EDI relationship between a hub and its trading partners. It provides key information on how to become EDI capable.
- SupplyTech offers EDI seminars to introduce the Hub's trading partners to EDI and the commercial benefits they can receive from this electronic link.
- SupplyTech offers a variety of training programs, ranging from EDI operations—using STX for the Microcomputer (DOS and Windows) and STX for the Mainframe—to mapping EDI and application file definitions using STX Overlay Generator or STMAP.
- The Implementation Services organization's Trading Partner Implementation Program (TPIP) provides services for EDI hubs, offering complete administrative and technical support of the hub trading partners.

Clients

SupplyTech customers include approximately 250 of the Fortune 500, U.S. and Canadian government agencies, and various small and medium-sized companies.

Approximately 800 STX installations are part of the Caterpillar, Inc. EDI program whereby seven EDI documents are exchanged between Caterpillar and its suppliers worldwide.

Other key clients include AT&T, Boeing, Dana Corporation, Ford Motor Company, General Motors, Johnson & Johnson, IBM, NEC Electronics, Nippondenso, Sears, Steelcase, Yellow Freight, and Xerox.

Marketing & Sales

SupplyTech markets its products through a direct sales force in the U.S. and Canada, affiliates in Mexico, Italy, Australia, and the U.K., and a network of international VARs throughout Africa, China, Japan, the Middle East, and South America.

Alliances

SupplyTech has various EDI relationships as follows:

- SupplyTech is an IBM Information Network MAP and Business Partner.
- SupplyTech is an agent for the AT&T, BT TYMNET (now MCI), IBM, Sterling, and GE Information Services value-added networks.
- AT&T comarkets STX for the Microcomputer.
- MCI comarkets STX for the Microcomputer.

- Ameritech comarkets STX in its region.
- SupplyTech is a Microsoft Solutions Provider.
- ADP resells STX in North America.
- WorldLinx (Bell Canada) resells STX for the Microcomputer in Canada.
- STX connects to all major third-party EDI networks and most private ones.
- SupplyTech has an EDI Services Alliance with Price Waterhouse.
- SupplyTech has international VARs for STX in Argentina, Australia, Belgium, Brazil, Canada, Colombia, France, Hong Kong, Israel, Italy, Japan, Korea, Luxembourg, the Netherlands, Poland, Puerto Rico, South Africa, Taiwan, the U.K., and Venezuela.

Competitors

Major competitors include GEIS and Sterling Software.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

January 1995

Supply Tech, Inc.

CEO: Ted Annis
President: Gail Jackson
1000 Campus Drive
Ann Arbor, MI 48104-6700
Phone: (313) 998-4000
Fax: (313) 998-4099

Status:	Private
Employees:	155 (12/94)
Revenue:	\$ 13,500,000
Fiscal Year End:	12/31/94

Key Points

- Supply Tech is one of the most successful EDI companies today. It has the largest installed base of all vendors of PC EDI software. Its strong marketing and sales organization puts it consistently in the major industries.
- Supply Tech has expanded its operations internationally with an affiliate in Mexico and in Italy and value-added resellers in 23 other countries worldwide.
- The company plans to introduce Windows and UNIX versions of its STX EDI software during

early 1995. A significant advanced translation feature has been added to all platforms.

Company Description

Supply Tech, Inc., founded in 1984 by Ted Annis and Gail Jackson, currently develops, markets and supports electronic data interchange (EDI) software for IBM PCs (STX® for the Microcomputer, STX® for Windows) and mainframes (STX® for the Mainframe) and related bar coding software for IBM PCs.

Supply Tech's EDI software is used worldwide in over 20 industries.

Supply Tech has the following industry relationships:

- Vice Chairperson of ANSI ASC X12
- Member of X12 Steering Committee

- Former member of DISA Board of Directors
- Member of the international EDIFACT SDG (Syntax Development Group)
- Participation in various industry groups, including AIAG, EIDX, VICS, TALC, MOTOR, AIA, CIDX, TCIF and IBCA.

Operations/Structure

Supply Tech, Inc. is headquartered in Ann Arbor (MI). The company affiliates in Mexico (Supply Tech de Mexico, S.A. de C.V., Mexico City) and Italy and plans another in Canada.

Company Strategy

Supply Tech's strategy is to provide EDI products with multilingual capabilities for use in industry and government worldwide.

The company plans to expand the availability of its EDI products to Windows and UNIX environments. Expanded mapping features are also planned for these products.

Supply Tech's marketing strategy includes direct sales and support in North America and Mexico, with the rest of the world serviced by qualified value-added resellers (VARs).

Financials

Supply Tech's 1994 revenue reached \$13.5 million, a 9% increase over 1993 revenue of \$12.4 million. A five-year revenue summary follows:

Supply Tech, Inc.
Five-Year Revenue Summary
(\$ Millions)

Item	Fiscal Year				
	1994	1993	1992	1991	1990
Revenue	\$13.5	\$12.4	\$10.0	\$8.4	\$7.6
• Percent change from previous year	9%	24%	19%	11%	9%

Supply Tech is profitable, has no significant long-term debt, is well-balanced financially and has no outside or venture-capital investment. An unused \$1 million line of credit is maintained at a local bank.

Market Financials

Supply Tech's customer base ranges from very small to very large companies. Its EDI software is used in over 20 industries, including retail, automotive, aerospace, chemical, computer, electronics, import/export, textile, food service, agriculture, federal government, Canadian government, education and health care.

Approximately 25% of the standard-based EDI users in the U.S.' automotive and retail industries use Supply Tech's EDI software.

Geographic Markets

Approximately 80% of Supply Tech's 1994 revenue was derived from the U.S., 10% from Canada and Mexico, and 10% from Europe, South America and the Pacific Rim.

Supply Tech has customers in over 22 countries, including the U.S., Canada, Mexico, France, Belgium, the U.K., Israel, Colombia, China, Australia and Japan.

Employees

Supply Tech currently has 150 employees, and 5 contractors (2 in sales and marketing, 2 in research and development and 1 in general and administrative), segmented as follows:

Services.....	4
Sales and marketing.....	48
Research and development.....	40
Customer support.....	50
General and administrative.....	13
	155

Key Products and Services

STX® for the Microcomputer, introduced in 1987, is Supply Tech's microcomputer-based general-purpose EDI software product.

- STX supports the electronic exchange of business transactions, including Releases, Advance Ship Notices, Purchase Orders, Purchase Order Acknowledgements, Requests for Quote, Quotes, Invoices, Remittance Advice, Bills of Lading and CAD files.
- STX supports all ANSI X12, TDCC, EDIFACT, and UCS EDI transactions, including the various industry-related standards such as AIAG, WINS, VICS, EDX, CIDX and TALC. U.S.A. Patent # 4,951,196 was issued to Supply Tech in August 1990 for the unique approach used in STX to handle all of these standards and all variations concurrently.
- STX for the Microcomputer runs on IBM and compatible microcomputers and offers the following features:
 - Connectivity to most public and private EDI networks
 - Support of 3780 bisynchronous, most asynchronous, and high-speed asynchronous communications
 - Automatic generation of data entry screens, report formats and flat-file interfaces

- A bar code interface
- On-demand hard copy reporting
- Unattended operation
- Menu-driven, push-button, autodial operation
- EDI Transaction Formats designed and implemented without programming (typically done by Supply Tech)
- Document turnaround
- Password security
- Flat-file interface for integration with other computer applications
- Multilingual interface

- STX for the Microcomputer is priced at \$2,495. The company provides training (\$495 per day) and hotline support (\$660/year for the base system).

STX® for the Mainframe, introduced in 1990, is available for IBM mainframes running DOS/VSE or MVS using VSAM and CICS.

- It supports all ANSI X12, TDCC and UCS EDI transactions, including all of the industry-related standards. EDIFACT support was added in mid-1991. Advanced mapping capabilities were added in the fourth quarter of 1993. STX operates as a standalone workstation or is integrated with an application.
- STX was ported to the IBM mainframe under a joint agreement with Dana Corporation. The product is compatible with STX for the Microcomputer.
- Pricing for the mainframe version ranges from \$19,500 to \$42,500, depending on the CPU model. Pricing includes one day of installation.

At the end of 1994, STX was installed at more than 15,000 sites, compared to more than 12,000 sites at the end of 1993, 10,000 sites at the end of 1992 and more than 7,500 sites at the end of 1991.

Supply Tech has enhanced the STX software to include non-X12 data (such as CAD files) with the EDI transaction. ANSI X12 has patterned its proposal for formatting non-X12 data after the Supply Tech implementation.

Supply Tech's patented approach to EDI translation solves the issues of EDI Standards Version Level and trading partners' unique EDI formats in a single, combined device. This device is known as an Overlay.

- Although Supply Tech provides regular Standards Updates, it also uses these updates as a reference point for developing an Overlay.
- STX performs translations based on an Overlay and handles an unlimited number of Overlays. Consequently, any number of Standards Version Levels and trading partner variations are handled concurrently. Supply Tech typically builds the necessary Overlays.
- The EDI programs of more than 1,400 hub companies are supported. More than 6,500 document Overlays corresponding to the hub-specific EDI document definitions have been created to support these EDI programs.
- An advanced mapping feature, XMAP, has been added for application file integration.

STBAR® is Supply Tech's bar code labeling software product for the IBM and compatible microcomputers running MS-DOS and Windows. STBAR is priced at \$995 and \$1,895, respectively.

Support services provided by Supply Tech include installation, training, software maintenance, network connection services, hub/trading partner testing, hotline technical support and updates.

- A separate EDI Implementation Services Department was formed in 1994. Substantial expansion is planned for 1995 and beyond.

Clients

Supply Tech customers include about 250 of the Fortune 500, U.S. and Canadian government agencies, and various small and medium-sized companies.

Approximately 800 STX installations are part of the Caterpillar, Inc. EDI program whereby seven EDI documents are exchanged between Caterpillar and its suppliers worldwide.

Other users include AT&T, Boeing, Dana Corporation, Ford Motor Company, General Motors, Johnson & Johnson, IBM, NEC Electronics, Nippondenso, Sears, Steelcase, Yellow Freight and Xerox.

Marketing & Sales

Supply Tech markets its products through a direct sales force in the U.S. and Canada, affiliates in Mexico and Italy and a network of international VARs.

Alliances

Supply Tech has various EDI relationships as follows:

- Supply Tech is an IBM Information Network MAP and Business Partner.
- Supply Tech is an agent for the AT&T, BT TYMNET (now MCI), IBM, Sterling and GE Information Services value-added networks.
- AT&T comarkets STX for the Microcomputer.
- MCI comarkets STX for the Microcomputer.
- Ameritech comarkets STX in its region.
- ADP resells STX in North America.

- WorldLinx (Bell Canada) resells STX for the Microcomputer in Canada.
- STX connects to all major third-party EDI networks and most private ones.
- Supply Tech has an EDI Services Alliance with Price Waterhouse.
- Supply Tech has international VARs for STX in Argentina, Australia, Belgium, Brazil, Canada, Columbia, France, Hong Kong, Israel, Italy, Japan, Korea, Luxembourg, the Netherlands, Poland, Puerto Rico, South Africa, Taiwan, the U.K. and Venezuela.

Competitors

Major competitors include GEIS and Sterling Software.

VENDOR ANALYSIS PROGRAM (VAP)

Key to Table of Contents

Cross Industry Application Solutions

Bank	- Banking and finance	AC	- Accounting
BServ	- Business services	ES	- Engineering/scientific
	(accountants, lawyers)	ET	- Education and training
Dis	- Distribution	HR	- Human resources
DMan	- Discrete manufacturing	OS	- Office systems
Educ	- Education	PA	- Planning and analysis
Fed	- Federal government	SA	- Sales/marketing
HS	- Health services		
Ins	- Insurance		Other
Loc	- Local government		
Man	- Manufacturing	CASE	- Computer-aided software engineering
PMan	- Process manufacturing	COM	- Computer output microfilm
PServ	- Personal/consumer services		
RSal	- Retail sales	DB	- On-line data base services
St	- State government	DR	- Disaster recovery
Tele	- Telecommunications	EDI	- Electronic data interchange
Tran	- Transportation		
Util	- Utilities		
WSal	- Wholesale sales		
Misc	- Construction/agriculture		

1 = Processing Services	5 = VAR/Turnkey Systems
2 = Network Services	6 = Professional Services
3 = Applications Software Products	7 = Systems Integration
4 = Systems Software Products	8 = Outsourcing

COMPANY PROFILE

SUPPLY TECH, INC.

1000 Campus Drive
Ann Arbor, MI 48104-6700
Phone: (313) 998-4000
Fax: (313) 998-4099

CEO:	Ted Annis
President:	Gail Jackson
Status:	Private Company
Total Employees:	152
Total Revenue:	\$12,370,000
Fiscal Year End:	12/31/93

Key Points

- Supply Tech is one of the most successful EDI companies today. It has the largest installed base of all vendors of PC EDI software. Its strong marketing and sales organization puts it consistently in the major industries.
- Supply Tech has expanded its operations internationally with an affiliate in Mexico and value-added resellers in 23 other countries worldwide.
- The company plans to introduce Windows and UNIX versions of its STX EDI software during 1994. A significant advanced transaction feature will be added to the Windows, UNIX and mainframe platforms.

Company Description

Supply Tech, Inc., founded in 1984 by Ted Annis and Gail Jackson, currently develops, markets and supports electronic data interchange (EDI) software for IBM PCs (STX^R for the Microcomputer) and mainframes (STX^R for the Mainframe) and related bar coding software for IBM PCs.

Supply Tech's EDI software is used worldwide in over 20 industries.

Supply Tech has the following industry relationships:

- Vice Chairperson of ANSI ASC X12
- Member of X12 Steering Committee
- Former member of DISA Board of Directors
- Member of the international EDIFACT SDG (Syntax Development Group)
- Participation in various industry groups, including AIAG, EIDX, VICS, TALC, MOTOR, AIA, CIDX, TCIF and IBCA.

Strategy

Supply Tech's strategy is to provide EDI products with multilingual capabilities for use in industry and government worldwide.

The company plans to expand the availability of its EDI products to Windows and UNIX environments. Expanded mapping features are also planned for these products.

Supply Tech's marketing strategy includes direct sales and support in North America and Mexico, with the rest of the world serviced by qualified value-added resellers (VARs).

Financials

Supply Tech's 1993 revenue reached nearly \$12.4 million, a 24% increase over 1992 revenue of \$10 million. A five-year revenue summary follows:

**SUPPLY TECH, INC.
FIVE-YEAR REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	1993	1992	1991	1990	1989
Revenue	\$12.4	\$10.0	\$8.4	\$7.6	\$7.0
• Percent change from previous year	24%	19%	11%	9%	133%

Supply Tech is profitable, has no significant long-term debt, is well-balanced financially and has no outside or venture-capital investment. An unused \$1 million line of credit is maintained at a local bank.

Market Financials

Supply Tech's customer base ranges from very small to very large companies. Its EDI software is used in over 20 industries, including retail, automotive, aerospace, chemical, computer, electronics, import/export, textile, food service, agriculture, federal government, Canadian government, education and health care.

Approximately 25% of the standard-based EDI users in the U.S.' automotive and retail industries use Supply Tech's EDI software.

Geographic Markets

Approximately 80% of Supply Tech's 1993 revenue was derived from the U.S., 10% from Canada and Mexico, and 10% from Europe, South America and the Pacific Rim.

Supply Tech has customers in over 22 countries, including the U.S., Canada, Mexico, France, Belgium, the U.K., Israel, Colombia, China, Australia and Japan.

Operations/ Structure

Supply Tech, Inc. is headquartered in Ann Arbor (MI). The company also has one affiliate--Supply Tech de Mexico, S.A. de C.V. (Mexico City) and plans another, Supply Tech Canada (Windsor).

Employees

Supply Tech currently has 146 employees and 6 contractors, segmented as follows:

Sales and marketing	46 + 2
Research and development	38 + 2
Customer support	50
General and administrative	<u>12 + 2</u>
	152

Key Products and Services

STX[®] for the Microcomputer, introduced in 1987, is Supply Tech's microcomputer-based general-purpose EDI software product.

- STX supports the electronic exchange of business transactions, including Releases, Advance Ship Notices, Purchase Orders, Purchase Order Acknowledgements, Requests for Quote, Quotes, Invoices, Remittance Advice, Bills of Lading and CAD files.

- STX supports all ANSI X12, TDCC, EDIFACT, and UCS EDI transactions, including the various industry-related standards such as AIAG, WINS, VICS, EDX, CIDX and TALC. U.S.A. Patent #4,951,196 was issued to Supply Tech in August 1990 for the unique approach used in STX to handle all of these standards and all variations concurrently.
- STX for the Microcomputer runs on IBM and compatible microcomputers and offers the following features:
 - Connectivity to most public and private EDI networks
 - Support of 3780 bisynchronous, most asynchronous, and high-speed asynchronous communications
 - Automatic generation of data entry screens, report formats and flat-file interfaces
 - A bar code interface
 - On-demand hard copy reporting
 - Unattended operation
 - Menu-driven, push-button, autodial operation
 - EDI Transaction Formats designed and implemented without programming (typically done by Supply Tech)
 - Document turnaround
 - Password security
 - Flat-file interface for integration with other computer applications
 - Multilingual interface
- STX for the Microcomputer is priced at \$2,495. The company provides training (\$495 per day) and hotline support (\$660/year for the base system).

STX[®] for the Mainframe, introduced in 1990, is available for IBM mainframes running DOS/VSE or MVS using VSAM and CICS.

- It supports all ANSI X12, TDCC and UCS EDI transactions, including all of the industry-related standards. EDIFACT support

was added in mid-1991. Advanced mapping capabilities were added in the fourth quarter of 1993. STX operates as a standalone workstation or is integrated with an application.

- STX was ported to the IBM mainframe under a joint agreement with Dana Corporation. The product is compatible with STX for the Microcomputer.
- Pricing for the mainframe version ranges from \$19,500 to \$42,500, depending on the CPU model. Pricing includes one day of installation.

At the end of 1992, STX was installed at more than 12,000 sites, compared to more than 10,000 sites at the end of 1992, more than 7,500 sites at the end of 1991 and 4,500 sites at the end of 1990.

Supply Tech has enhanced the STX software to include non-X12 data (such as CAD files) with the EDI transaction. ANSI X12 has patterned its proposal for formatting non-X12 data after the Supply Tech implementation.

Supply Tech's patented approach to EDI translation solves the issues of EDI Standards Version Level and trading partners' unique EDI formats in a single, combined device. This device is known as an Overlay.

- Although Supply Tech provides regular Standards Updates, it also uses these updates as a reference point for developing an Overlay.
- STX performs translations based on an Overlay and handles an unlimited number of Overlays. Consequently, any number of Standards Version Levels and trading partner variations are handled concurrently. Supply Tech typically builds the necessary Overlays.
- The EDI programs of more than 1,000 hub companies are supported. More than 4,000 document Overlays corresponding to the hub-specific EDI document definitions have been created to support these EDI programs.
- An advanced mapping feature, XMAP, has been added for application file integration.

STBAR[®] is Supply Tech's bar code labeling software product for the IBM and compatible microcomputers running MS-DOS and Windows. STBAR is priced at \$995 and \$1,895, respectively.

Support services provided by Supply Tech include installation, training, software maintenance, network connection services, hub/trading partner testing, hotline technical support and updates.

Marketing & Sales

Supply Tech markets its products through a direct sales force in the U.S. and Canada, an affiliate Mexico and a network of international VARs.

Alliances

Supply Tech has various EDI relationships as follows:

- Supply Tech is an IBM Information Network MAP and Business Partner.
- Supply Tech is an agent for the AT&T, BT TYMNET (now MCI), IBM, Sterling and GE Information Services value-added networks.
- AT&T comarkets STX for the Microcomputer.
- MCI comarkets STX for the Microcomputer.
- Ameritech comarkets STX in its region.
- ADP resells STX in North America.
- WorldLinx (Bell Canada) resells STX for the Microcomputer in Canada.
- STX connects to all major third-party EDI networks and most private ones.
- Supply Tech has an EDI Services Alliance with Price Waterhouse.
- Supply Tech has international VARs for STX in Argentina, Australia, Belgium, Brazil, Chile, Canada, Columbia, France, Germany, Hong Kong, Israel, Italy, Japan, Korea, Luxembourg, the Netherlands, Poland, Puerto Rico, South Africa, Taiwan, the U.K. and Venezuela.

Clients

Supply Tech customers include about 250 of the Fortune 500, U.S. and Canadian government agencies, and various small and medium-sized companies.

Approximately 800 STX installations are part of the Caterpillar, Inc. EDI program whereby seven EDI documents are exchanged between Caterpillar and its suppliers worldwide.

Other users include AT&T, Boeing, Dana Corporation, Ford Motor Company, General Motors, Johnson & Johnson, IBM, NEC Electronics, Nippondenso, Sears, Steelcase, Yellow Freight and Xerox.

Competitors

Major competitors include GEIS, Sterling Software and TSI.

**COMPANY
PROFILE**

SUPPLY TECH, INC.

1000 Campus Drive
Ann Arbor, MI 48104-6700
Phone: (313) 998-4000
Fax: (313) 998-4099

CEO:	Ted Annis
President:	Gail Jackson
Status:	Private Company
Total Employees:	152
Total Revenue:	\$10,000,000
Fiscal Year End:	12/31/92

Key Points

- Supply Tech is one of the most successful EDI companies today. It has the largest installed base of all vendors of PC EDI software. Its strong marketing and sales organization puts it consistently in the major industries.
- Supply Tech has expanded its operations internationally with affiliates in Canada and Mexico and value-added resellers in 23 other countries worldwide.
- The company plans to introduce a UNIX version of its STX EDI software during 1993.

Company Description

Supply Tech, Inc., founded in 1984 by Ted Annis and Gail Jackson, currently develops, markets, and supports electronic data interchange (EDI) software for IBM PCs (STX^R for the Microcomputer) and mainframes (STX^R for the Mainframe) and related bar coding software for IBM PCs.

Supply Tech's EDI software is used worldwide in over 20 industries.

Supply Tech has the following industry relationships:

- Chairperson of ANSI ASC X12 Committee C
- Member of X12 Steering Committee
- Former member of DISA Board of Directors
- Member of the international EDIFACT SDG (Syntax Development Group)
- Secretary of X12 Conference Committee, Task Group 4, Committee D
- Participation in various industry groups, including AIAG, EIDX, VICS, TALC, MOTOR, AIA, CIDX, TCIF, and IBCA.

Strategy

Supply Tech's strategy is to provide EDI products with multilingual capabilities for use in industry and government worldwide.

The company plans to expand the availability of its EDI products to UNIX environments.

Supply Tech's marketing strategy includes direct sales and support in North America, with the rest of the world serviced by qualified value-added resellers (VARs).

Financials

Supply Tech's 1992 revenue reached \$10.0 million, a 19% increase over 1991 revenue of \$8.4 million. A five-year revenue summary follows:

SUPPLY TECH, INC.
FIVE-YEAR REVENUE SUMMARY
(\$ millions)

ITEM	FISCAL YEAR				
	1992	1991	1990	1989	1988
Revenue	\$10.0	\$8.4	\$7.6	\$7.0	\$3.0
• Percent change from previous year	19%	11%	9%	133%	43%

Supply Tech is profitable, has no significant long-term debt, is well-balanced financially, and has no outside or venture-capital investment. An unused \$1 million line of credit is maintained at a local bank.

Market Financials

Supply Tech's customer base ranges from very small to very large companies. Its EDI software is used in over 20 industries, including retail, automotive, aerospace, chemical, computer, electronics, import/export, textile, food service, agriculture, federal government, Canadian government, education, and health care.

Approximately 25% of the standard-based EDI users in the U.S.' automotive and retail industries use Supply Tech's EDI software.

Geographic Markets

Approximately 80% of Supply Tech's 1992 revenue was derived from the U.S., 10% from Canada and Mexico, and 10% from Europe, South America, and the Pacific Rim.

Supply Tech has customers in over 17 countries, including the U.S., Canada, Mexico, France, Belgium, the U.K., Israel, Colombia, China, Australia, and Japan.

**Operations/
Structure**

Supply Tech, Inc. is headquartered in Ann Arbor (MI). The company also has two affiliates--Supply Tech de Mexico (Mexico City) and Supply Tech Canada (Windsor).

Employees

Supply Tech currently has 146 employees and 6 contractors, segmented as follows:

Sales and marketing	46 + 2
Research and development	38 + 2
Customer support	50
General and administrative	<u>12 + 2</u>
	152

**Key Products
and Services**

STX[®] for the Microcomputer, introduced in 1987, is Supply Tech's microcomputer-based general-purpose EDI software product.

- STX supports the electronic exchange of business transactions, including Releases, Advance Ship Notices, Purchase Orders, Purchase Order Acknowledgements, Requests for Quote, Quotes, Invoices, Remittance Advice, Bills of Lading, and CAD files.

- STX supports all ANSI X12, TDCC, EDIFACT, and UCS EDI transactions, including the various industry-related standards such as AIAG, WINS, VICS, EDX, CIDX, and TALC. U.S.A. Patent #4,951,196 was issued to Supply Tech in August 1990 for the unique approach used in STX to handle all of these standards and all variations concurrently.
- STX for the Microcomputer runs on IBM and compatible microcomputers and offers the following features:
 - Connectivity to most public and private EDI networks
 - Support of 3780 bisynchronous, most asynchronous, and high-speed asynchronous communications
 - Automatic generation of data entry screens, report formats, and flat-file interfaces
 - A bar code interface
 - On-demand hard copy reporting
 - Unattended operation
 - Menu-driven, push-button, autodial operation
 - EDI Transaction Formats designed and implemented without programming (typically done by Supply Tech)
 - Document turnaround
 - Password security
 - Flat-file interface for integration with other computer applications
 - Multilingual interface
- STX for the Microcomputer is priced at \$2,495. The company provides training (\$495 per day) and hotline support (\$660/year for the base system).

STX[®] for the Mainframe, introduced in 1990, is available for IBM mainframes running DOS/VSE or MVS using VSAM and CICS.

- It supports all ANSI X12, TDCC, and UCS EDI transactions, including all of the industry-related standards. EDIFACT support

was added in mid-1991. Advanced mapping capabilities are scheduled for the fourth quarter of 1993.

- STX was ported to the IBM mainframe under a joint agreement with Dana Corporation. The product is compatible with STX for the Microcomputer.
- Pricing for the mainframe version ranges from \$19,500 to \$42,500, depending on the CPU model. Pricing includes one day of installation.

At the end of 1992, STX was installed at over 10,000 sites, compared to over 7,500 sites at the end of 1991 and 4,500 sites at the end of 1990.

Supply Tech has enhanced the STX software to include non-X12 data (such as CAD files) with the EDI transaction. ANSI X12 has patterned its proposal for formatting non-X12 data after the Supply Tech implementation.

Supply Tech's patented approach to EDI translation solves the issues of EDI Standards Version Level and trading partners' unique EDI formats in a single, combined device. This device is known as an overlay.

- Although Supply Tech provides regular Standards Updates, it also uses these updates as a reference point for developing an overlay.
- STX performs translations based on an overlay and handles an unlimited number of overlays. Consequently, any number of Standards Version Levels and trading partner variations are handled concurrently. Supply Tech typically builds the necessary overlays.
- The EDI programs of over 700 hub companies are supported. Over 2,500 document overlays corresponding to the hub-specific EDI document definitions have been created to support these EDI programs.

STBAR[®] is Supply Tech's bar code labeling software product for the IBM and compatible microcomputers running MS-DOS and Windows. STBAR is priced at \$995.

Support services provided by Supply Tech include installation, training, software maintenance, network connection services, hub/trading partner testing, hotline technical support, and updates.

**Marketing
& Sales**

Supply Tech markets its products through a direct sales force in the U.S., affiliates in Canada and Mexico, and a network of international VARs.

Alliances

Supply Tech has various EDI relationships as follows:

- Supply Tech is an IBM Information Network MAP and Business Partner.
- Supply Tech is an agent for the BT TYMNET, IBM, Sterling, and GE Information Services value-added networks and comarketer of the AT&T value-added network.
- AT&T comarkets STX for the Microcomputer.
- MCI comarkets STX for the Microcomputer.
- Ameritech comarkets STX in its region.
- ADP resells STX in North America.
- WorldLinx (Bell Canada) resells STX for the Microcomputer in Canada.
- STX connects to all major third-party EDI networks and most private ones.
- Supply Tech has an EDI Services Alliance with Price Waterhouse.
- Supply Tech has international VARs for STX in Argentina, Australia, Belgium, Brazil, Chile, Canada, Columbia, France, Germany, Hong Kong, Israel, Italy, Japan, Korea, Luxembourg, the Netherlands, Poland, Portugal, Puerto Rico, South Africa, Spain, Taiwan, the U.K., and Venezuela.

Clients

Supply Tech customers include about 200 of the Fortune 500, U.S. and Canadian government agencies, and various small and medium-sized companies.

Approximately 800 STX installations are part of the Caterpillar, Inc. EDI program whereby seven EDI documents are exchanged between Caterpillar and its suppliers worldwide.

Other users include AT&T, Boeing, Dana Corporation, Ford Motor Company, General Motors, Johnson & Johnson, IBM, NEC Electronics, Nippondenso, Sears, Steelcase, Yellow Freight, and Xerox.

Competitors

Major competitors include GEIS, Sterling Software, TSI, and TI.

COMPANY PROFILE

SUPPLY TECH, INC.

1000 Campus Drive
Ann Arbor, MI 48104
(313) 998-4000
Fax: (313) 998-4099

Ted Annis, CEO
Gail Jackson, President
Private Company
Total Employees: 85
Total Revenue, Fiscal Year End
12/31/90: \$7,600,000

The Company

Supply Tech, Inc., founded in 1984 by Ted Annis and Gail Jackson, initially developed IBM PC-based electronic data interchange (EDI) software for the automotive industry. Supply Tech is expanding its markets to cover other industries that use EDI throughout the world. The company's products focus exclusively on EDI and bar coding.

SUPPLY TECH, INC. FOUR-YEAR REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR			
	12/90	12/89	12/88	12/87
Revenue	\$7.6	\$7.0	\$3.0	\$2.1
• Percent increase from previous year	9%	133%	43%	N/A

Key Products and Services

STX^R (formerly STX12^R) for the Microcomputer, introduced in 1987, is Supply Tech's microcomputer-based general-purpose EDI software product.

- STX supports the electronic exchange of business transactions, including Releases, Advance Ship Notices, Purchase Orders, Purchase Order Acknowledgements, Requests for Quote, Quotes, Invoices, Remittance Advice, Bills of Lading, and CAD files.
- STX supports all ANSI X12, TDCC (Motor, Rail, Air, Ocean), EDIFACT, and UCS transactions, including the various industry-related standards such as AIAG, WINS, VICS, EDX, CIDX, and TALC.

- STX for the Microcomputer runs on IBM and compatible microcomputers and offers the following features:
 - Connectivity to most public and private EDI networks
 - Support of 3780 bisynchronous, most asynchronous, and high-speed asynchronous communications
 - Automatic generation of data entry screens, report formats, and flat-file interfaces
 - A bar code interface
 - On-demand hard copy reporting
 - Unattended operation
 - Menu-driven, push-button, autodial operation
 - Help windows for assistance during operation
 - Transactions designed and implemented without programming (typically done by Supply Tech)
 - Document turnaround
 - Password security
 - Flat-file interface for integration with other computer applications
- STX for the Microcomputer is priced at \$2,295. The company provides training (\$495 per day) and hotline support (\$600/year for a Level 1 System, \$780/year for a Level 2 System).
- As of the end of 1990, STX12 was installed at over 4,500 sites, compared to over 3,000 sites as of the end of 1989, 1,500 sites as of mid-1989, and 550 sites as of mid-1988.
 - Approximately 700 installations are part of the Caterpillar, Inc. EDI program whereby seven EDI documents are exchanged between Caterpillar and its suppliers.
 - Other users include AT&T, IBM, General Motors, Jordache, Ford Motor Company, Businessland, Hitachi, the U.S. government, other Fortune 500 companies, and various small- and medium-sized companies.

STX[®] for the Mainframe, introduced in 1990, is available for IBM mainframes running DOS/VSE or MVS using VSAM and CICS. It supports all ANSI X12, TDCC, and UCS EDI transactions, including all of the industry-related standards. EDIFACT support is planned for mid-year, 1991.

- STX was ported to the IBM mainframe under a joint agreement with Dana Corporation. The product is compatible with STX for the Microcomputer.
- Pricing for the mainframe version ranges from \$19,500 to \$39,500, depending on the CPU model. Pricing includes one day of installation.

Supply Tech has enhanced the STX software to include non-X12 data (such as CAD files) with the EDI transaction. ANSI X12 has patterned its proposal for formatting non-X12 data after the Supply Tech implementation.

Supply Tech's patented approach to EDI translation solves the issues of EDI Standards Version Level and trading partners' unique EDI formats in a single, combined device. This device is known as an Overlay.

- Although Supply Tech provides regular Standards Updates, it also uses these updates as a reference point for developing an Overlay.
- STX performs translations based on an Overlay and handles an unlimited number of Overlays. Consequently, any number of Standards Version Levels and trading partner variations are handled concurrently. Supply Tech typically builds the necessary Overlays.

STBAR[®] is Supply Tech's bar code labeling software product for IBM and compatible microcomputers running MS-DOS. STBAR is priced at \$1,895.

Supply Tech employees are chairpersons of ANSI ACS X12 Committee C and are North American representatives to EDIFACT.

Industry Markets

Supply Tech's EDI software is marketed to a range of industries, including automotive, manufacturing, transportation, financial, government, grocery, retail, warehousing, aerospace, leasing, health care, education, and computers.

Supply Tech is an authorized agent for GE Information Services and BT North America. The company also has marketing agreements with AT&T, MCI, Infonet, and Automatic Data Processing, and participates in the IBM Industry Marketing Assistance Program.

**Geographic
Markets**

A majority of Supply Tech's revenue is derived from the U.S. and Canada. The company also markets its products in Europe, Mexico, and South America.

COMPANY PROFILE

SUPPLY TECH, INC.

27784 Franklin Road
Southfield, MI 48034
(313) 357-3430

Ted Annis, CEO
Gail Jackson, President
Private Company
Total Employees: 71
Total Revenue, Fiscal Year End
12/31/89: \$7,000,000

The Company

Supply Tech, Inc., founded in 1984 by Ted Annis and Gail Jackson, initially developed IBM PC-based electronic data interchange (EDI) software for the automotive industry. Supply Tech has subsequently expanded its markets to cover other industries that use EDI. The company's products focus exclusively on EDI and bar coding.

SUPPLY TECH, INC. THREE-YEAR REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR		
	12/89	12/88	12/87
Revenue	\$7.0	\$3.0	\$2.1
• Percent increase from previous year	133%	43%	N/A

Key Products and Services

STX12^R for the Microcomputer, introduced in 1987, is Supply Tech's microcomputer-based general-purpose EDI software product.

- STX12 supports the electronic exchange of business transactions, including Releases, Advance Ship Notices, Purchase Orders, Purchase Order Acknowledgements, Requests for Quote, Quotes, Invoices, Remittance Advice, Bills of Lading, and CAD files.
- STX12 supports all ANSI X12, TDCC (Motor, Rail, Air, Ocean), EDIFACT, and UCS transactions, including the various industry-related standards such as AIAG, WINS, VICS, EDX, CIDX, and TALC.

- STX12 for the Microcomputer runs on IBM and compatible microcomputers and offers the following features:
 - Connectivity to most public and private EDI networks
 - Support of 3780 bisynchronous, most asynchronous, and high-speed asynchronous communications
 - Automatic generation of data entry screens, report formats, and flat-file interfaces
 - A bar code interface
 - On-demand hard copy reporting
 - Unattended operation
 - Menu-driven, push-button, autodial operation
 - Help windows for assistance during operation
 - Transactions designed and implemented without programming (typically done by Supply Tech)
 - Document turnaround
 - Password security
 - Flat-file interface for integration with other computer applications
- STX12 for the Microcomputer is priced at \$2,295. The company provides installation and training (\$500 per day) and hotline support (\$600/year for a Level 1 System, \$780/year for a Level 2 System).
- As of the end of 1989, STX12 was installed at over 3,000 sites, compared to 1,500 sites as of mid-1989 and 550 sites as of mid-1988.
 - Approximately 500 installations are part of the Caterpillar, Inc. EDI program whereby seven EDI documents are exchanged between Caterpillar and its suppliers.
 - Other users include AT&T, IBM, General Motors, Jordache, Ford Motor Company, Businessland, Hitachi, the U.S. government, other Fortune 500 companies, and various small- and medium-sized companies.

STX12^R for the Mainframe, introduced in 1989, is available for IBM mainframes running DOS/VSE or MVS using VSAM and CICS. It supports all ANSI X12, TDCC, and UCS EDI transactions, including all of the industry-related standards. EDIFACT support is planned for year-end 1990.

- STX12 was ported to the IBM mainframe under a joint agreement with Dana Corporation. The product is compatible with STX12 for the Microcomputer.
- Pricing for the mainframe version ranges from \$19,500 to \$49,500, depending on the CPU model. Pricing includes one day of installation support.

Supply Tech has enhanced the STX12 software to include non-X12 data (such as CAD files) with the EDI transaction. ANSI X12 has patterned its proposal for formatting non-X12 data after the Supply Tech implementation.

Supply Tech's patent-applied-for approach to EDI translation solves the issues of EDI Standards Version Level and trading partners' unique EDI formats in a single, combined device. This device is known as an Overlay.

- Although Supply Tech provides regular Standards Updates, it also uses these updates as a reference point for developing an Overlay.
- STX12 performs translations based on an Overlay and handles an unlimited number of Overlays. Consequently, any number of Standards Version Levels and trading partner variations are handled concurrently. Supply Tech typically builds the necessary Overlays.

STBARTM is Supply Tech's bar code labeling software product for IBM and compatible microcomputers running MS-DOS. STBAR is priced at \$1,795.

Supply Tech employees are chairpersons of ANSI ACS X12 Committee C. The company also has an employee on the Board of Directors of DISA, the ANSI X12 Secretariat.

Industry Markets

Supply Tech's EDI software is marketed to a range of industries, including automotive, manufacturing, transportation, financial, government, grocery, retail, and warehousing.

Supply Tech is an authorized agent for GE Information Services, Western Union, and McDonnell Douglas. The company also has marketing agreements with AT&T, Infonet, and Automatic Data Processing, and participates in the IBM Industry Marketing Assistance Program.

STX12 is comarketed by AT&T.

Geographic Markets

A majority of Supply Tech's revenue is derived from the U.S. and Canada. The company also markets its products in Europe, Mexico, South America, and Japan.

COMPANY PROFILE

SUPPLY TECH, INC.

27784 Franklin Road
Southfield, MI 48034
(313) 357-3430

Ted Annis, CEO
Gail Jackson, President
Private Company
Total Employees: 35
Total Revenue, Fiscal Year End
12/31/88: \$3,000,000

The Company

Supply Tech, Inc., founded in 1984, initially developed IBM PC-based electronic data interchange (EDI) software for the automotive industry. Supply Tech has subsequently expanded its markets to cover any other industry that uses EDI. The company's products focus exclusively on EDI and bar coding.

Supply Tech's 1988 revenue reached \$3 million, a 43% increase over 1987 revenue of \$2.1 million.

The company currently has 35 employees.

Key Products and Services

STX12™, introduced in 1987, is Supply Tech's microcomputer-based general-purpose EDI software product.

- STX12 supports the electronic exchange of business transactions, including Releases, Advance Ship Notices, Purchase Orders, Purchase Order Acknowledgements, Requests for Quote, Quotes, Invoices, Remittance Advice, Bills of Lading, and CAD files.
- STX12 supports all ANSI X12, TDCC (Motor, Rail, Air, Ocean), EDIFACT, and UCS transactions, including the various industry-related standards such as AIAG, WINS, VICS, EDX, CIDX, and TALC.
- STX12 runs on IBM and compatible microcomputers and offers the following features:
 - Connectivity to most public and private EDI networks
 - Support of 3780 bisynchronous, most asynchronous, and high-speed asynchronous communications
 - Push button, autodial operation

- Automatic generation of data entry screens, report formats, and flat-file interface
 - A bar code interface
 - On-demand hard copy reporting
 - Automatic backup, recovery, and retransmission
 - Unattended operation
 - Menu-driven operation
 - Help windows for assistance during operation
 - Transactions designed and implemented without programming
 - Document turnaround
 - Password security
 - Flat file interface for integration with other computer applications
- STX12 is priced at \$1,995 (Level 1 System) and \$3,990 (Level 2 System).
 - The company provides installation and training (\$680 a day) and hotline support (\$600/year for Level 1 System, \$780/year for Level 2 System).
 - As of mid-1989, STX12 was installed at over 1,500 sites, compared to 550 sites a year ago.
 - Approximately 500 installations are part of the Caterpillar, Inc. EDI program whereby seven EDI documents are exchanged between Caterpillar and its suppliers.
 - Other users include AT&T, IBM, General Motors, Jordache, Ford Motor Company, Businessland, Hitachi, the U.S. government, other Fortune 500 companies, and various small- and medium-sized companies.

In April 1989, Supply Tech announced the availability of STX12 for IBM mainframes running DOS/VSE or MVS. STX12 was ported to the IBM mainframe under a joint agreement with Dana Corporation. Pricing for the mainframe version starts at \$25,000 and is based on the CPU model.

Supply Tech has enhanced the STX12 software to include non-standard or non-X12 data with the EDI transaction. ANSI X12 has patterned its proposal for formatting non-X12 data after the Supply Tech implementation. Such data are usually associated with commonly used microcomputer software such as Lotus 1-2-3, dBASE III, or AutoCAD.

Supply Tech's first product, ST1™, was introduced in 1984 for the automotive industry and uses a combination of proprietary and ANSI X12 standards. ST1 is now a sub-module of STX12.

STBAR™ is Supply Tech's bar code labeling software product for IBM and compatible microcomputers running MS-DOS. STBAR is priced at \$1,795.

Supply Tech provides consulting services for ANSI X12 and Automotive Industry Action Group (AIAG) standards interpretation and use. The company also offers custom transaction development services.

Industry Markets

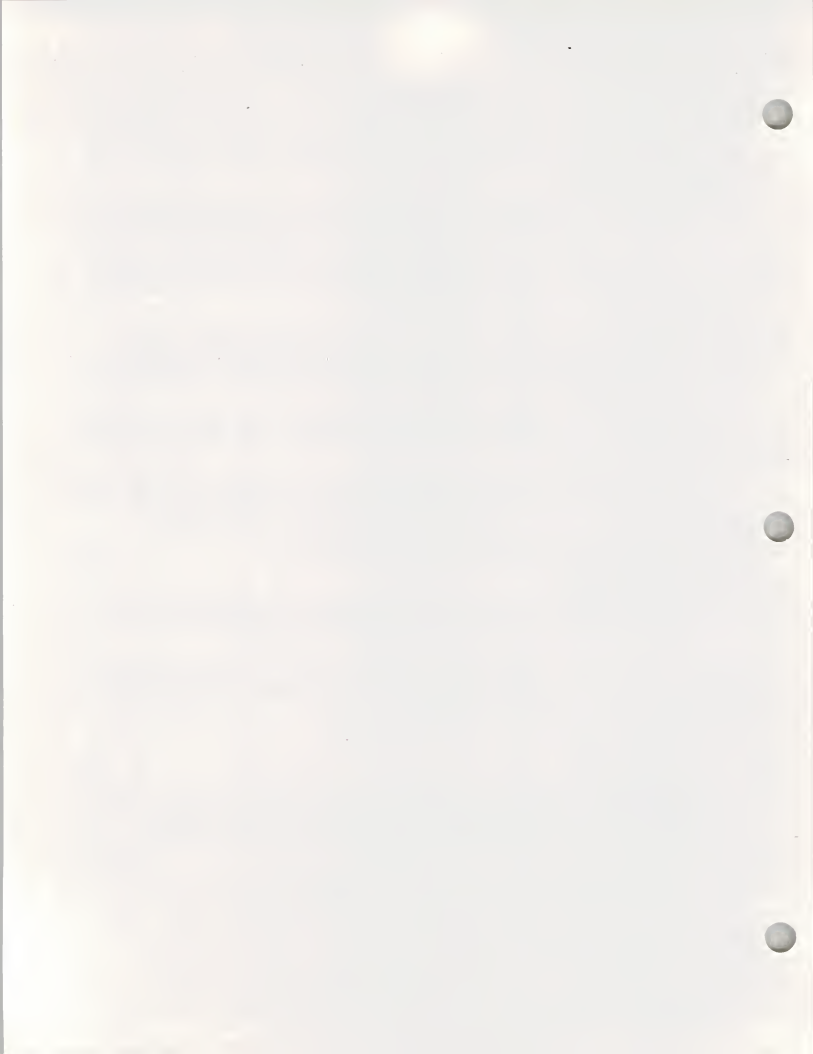
Supply Tech's EDI software is marketed to a range of industries, including automotive, manufacturing, transportation, financial, government, grocery, retail, and warehousing.

Supply Tech is an authorized agent for GE Information Services' EDI*EXPRESS and participates in the IBM Industry Marketing Assistance Program.

STX12 is comarketed by AT&T.

Geographic Markets

A majority of Supply Tech's revenue is derived from the U.S. and Canada. The company also markets its products in Europe, Mexico, and South America.



COMPANY PROFILE

SUPPLY TECH, INC.

27784 Franklin Road
Southfield, MI 48034
(313) 357-3430

Ted Annis, CEO
Private Company
Total Employees: 20
Total Revenue, Fiscal Year End
12/31/87: \$2,100,000

The Company

Supply Tech, Inc. was founded in 1984 by personnel from Ford Motor Company. Supply Tech initially developed IBM PC-based electronic data interchange (EDI) software for the automotive industry. The company's products focus exclusively on EDI and bar coding.

The company currently has 20 employees.

Key Products and Services

STX12TM, introduced in 1987, is Supply Tech's microcomputer-based general-purpose EDI software product. STX12 supports all ANSI X12 and TDCC (Motor, Rail, Air, Ocean) transactions, including the various industry-related standards such as AIAG, WINS, VICS, TALC, and UCS.

- STX12 runs on IBM and compatible microcomputers and features the following:
 - Push button, autodial operation.
 - Automatic generation of data entry screens, report formats, and flat-file interface.
 - On-demand hard copy reporting.
 - Automatic backup, recovery, and retransmission.
 - Unattended communication.
 - Menu-driven operation.
 - Help windows for assistance during operation.
 - Transactions designed and implemented without programming.

- Password security.
- Data encryption (on request).
- Flat file interface for integration with other computer applications.
- STX12 is priced at \$1,995 (Level 1 System) and \$3,990 (Level 2 System).
- The company provides installation and training (\$600 a day) and hotline support (\$600/year for Level 1 System, \$780/year for Level 2 System).
- STX12 is installed at over 550 sites.

Supply Tech has enhanced STX12 software to include non-standard or non-X12 data with the EDI transaction. Such data are usually associated with commonly used microcomputer software such as Lotus 1-2-3 or dBASE III.

Supply Tech's first product, ST1™, was introduced in 1984 for the automotive industry and uses a combination of proprietary and ANSI X12 standards. ST1 is installed at over 400 locations in the U.S., Canada, and the U.K.

Supply Tech provides consulting services for ANSI X12 and Automotive Industry Action Group (AIAG) standards interpretation and use. The company also offers custom transaction development services.

Industry Markets

Supply Tech's EDI software is marketed to a range of industries, including automotive, manufacturing, transportation, financial, government, grocery, retail, and warehousing.

Supply Tech is an authorized agent for GE Information Services and TranSettlements. The company also has a marketing agreement with Control Data Corporation.

Geographic Markets

A majority of Supply Tech's revenue is derived from the U.S. and Canada. The company also markets its products in Europe, Mexico, and South America.

COMPANY HIGHLIGHT

SWANSON ANALYSIS SYSTEMS, INC.

P.O. Box 65
Houston, PA 15342
(412) 746-3304

John A. Swanson, President
Private corporation
Total employees: 17
Total revenues, fiscal year end
6/30/78: \$1,250,000*

THE COMPANY

- Swanson Analysis Systems, Inc. (SASI) was founded in 1970 by President John A. Swanson. It has developed and now maintains ANSYS®, an applications software package for engineering analysis.
- The company has two subsidiaries which perform engineering and manufacturing consulting using ANSYS and other analysis products.
- ANSYS major competitors are NASTRAN (a government package), the MARK Program, and STARDYNE.

KEY PRODUCTS AND SERVICES

- The company's only product is ANSYS. It has approximately 65 installations including 28 service bureaus in the U.S. and overseas.
- ANSYS is a large scale general purpose engineering analysis software system. According to SASI, it employs finite element technology for the solution of several classes of engineering analysis problems.
- Its capabilities include:
 - Structural analyses: static and dynamic; elastic, plastic, creep, and swelling; small and large deflections.
 - Heat transfer analyses: steady-state and transient; conduction, convection, and radiation.
 - Piping analyses
 - Pressure vessel analyses
 - Thermal analyses
 - Wave motion analyses
 - Electric analyses

*INPUT estimate

October 1978

COMPANY HIGHLIGHT/SWANSON ANALYSIS SYSTEMS, INC.

- ANSYS offers the user a variety of analytic approaches, including:
 - Static
 - Mode-frequency
 - Harmonic response
 - Non-linear transient dynamic
 - Reduced linear dynamic
 - Heat conduction
 - Substructures
- The program can be run on the following mainframes and minicomputers:
 - IBM System/360 Model 65, and IBM System/370 Model 135 and larger CPUs running under DOS, OS, and OS/VS.
 - Control Data 6000 and 7000 Series and Cyber 175 and 176 CPUs.
 - Univac 1106, 1108, and 1110.
 - Honeywell 6000 Series.
 - Prime Computer Prime 300, Prime 400, or larger.
 - Modcomp III and IV.
- The software package is available on a royalty basis only; the price depends on the host computer size.

APPLICATIONS ANSYS is a utility software package.

INDUSTRY MARKETS SASI users are service bureaus and discrete manufacturing firms.

GEOGRAPHIC MARKETS

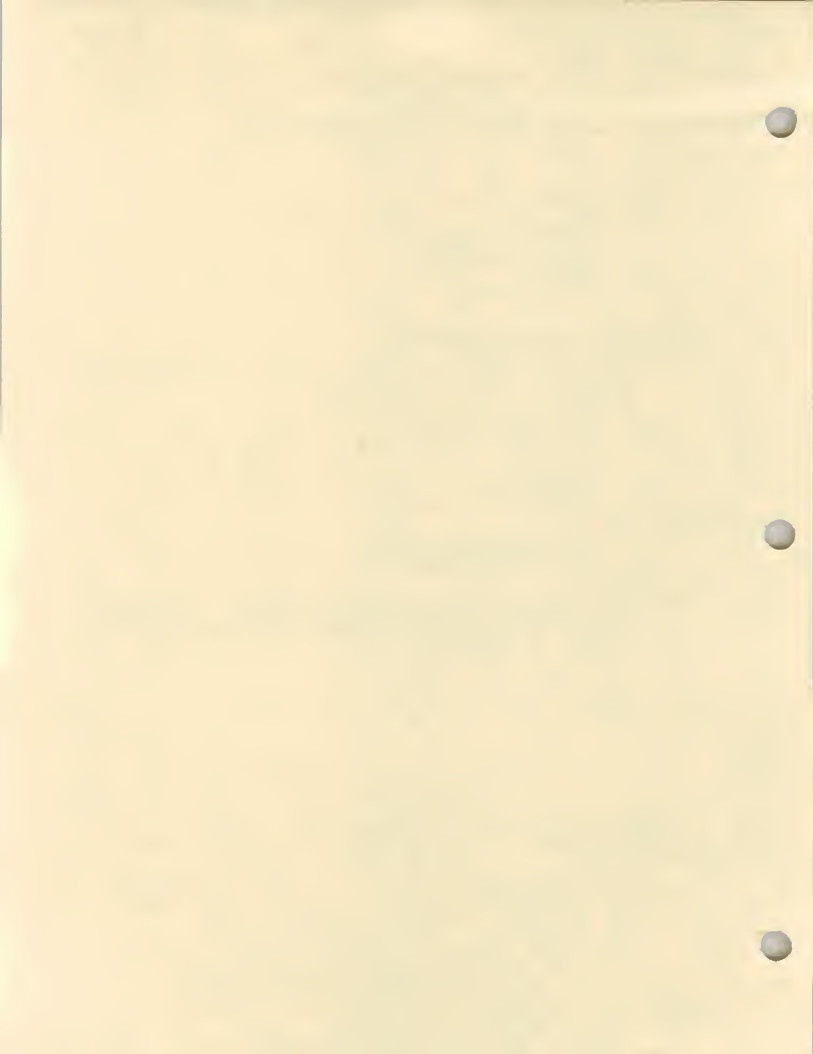
- The ANSYS package is installed throughout the U.S., as well as in Canada, Japan, South Africa, Australia, West Germany, Sweden, France, The Netherlands, and Switzerland.
- Companies offering the software through their service bureaus include:
 - Boeing
 - Grumman
 - CHI
 - Computer Sciences
 - Control Data
 - General Electric
 - McDonnell Douglas

COMPANY HIGHLIGHT/SWANSON ANALYSIS SYSTEMS, INC.

- Multiple Access
- Sun
- Systems Dimensions
- United Computing Systems
- University Computing
- Itel
- Westinghouse Electric

COMPUTER HARDWARE AND SOFTWARE

- SASI uses the following in-house equipment for software testing and development:
 - Minicomputers
 - I Modcomp IV
 - I Prime 300
 - I Prime 400
 - Terminals
 - I CDC 200 UT
 - I Cope 1200
 - I Tektronix 4014
 - 8 Tektronix 4006
 - I Texas Instruments Silent 735
- The CDC and Cope terminals and the Prime and Modcomp minicomputers have links to external service bureaus and client mainframes. The Texas Instrument and Tektronix terminals are linked to these remote sites as well as to the SASI in-house minicomputers.



Dropped 1/81

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COMPANY HIGHLIGHT

SWANSON ANALYSIS SYSTEMS, INC.
870 Pine View Drive
Elizabeth, PA 15037
(412) 751-1940

John A. Swanson, President
Private corporations
Total employees: 14
Total revenues, fiscal year
end 6/30/77: \$1,000,000*

THE COMPANY

- Swanson Analysis Systems, Inc. (SASI) was founded in 1970 by President John A. Swanson. It has developed and now maintains ANSYS®, an applications software package for engineering analysis.
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- ANSYS major competitors are NASTRAN (a government package), the MARK Program, and STARDYNE.

KEY PRODUCTS AND SERVICES

- The company's only product is ANSYS. It has approximately 50 installations including 34 service bureaus in the U.S. and overseas.
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- Its capabilities include:
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 - Heat transfer analyses: steady-state and transient; conduction, convection, and radiation.
 - Piping analyses
 - Pressure vessel analyses
 - Thermal analyses
 - Wave motion analyses
 - Electric analyses

* INPUT estimate

COMPANY HIGHLIGHT/SWANSON ANALYSIS SYSTEMS, INC

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 - Static
 - Mode-frequency
 - Harmonic response
 - Non-linear transient dynamic
 - Reduced linear dynamic
 - Heat conduction
 - Substructures
- The program can be run on the following mainframes and minicomputers:
 - IBM 360/65 and IBM 370/135 and larger running under DOS, OS, OS/VS.
 - Control Data Series 6000 and 7000 and Cyber 176
 - Univac 1106, 1108, and 1110
 - Honeywell 6000 Series
 - Prime Computer Prime 300 or larger
 - Modcomp III and IV
- It is available on a royalty basis only; the price depends on the host computer size.

APPLICATIONS ANSYS is a utility software package.

INDUSTRY MARKETS SASI users are service bureaus and discrete manufacturing firms.

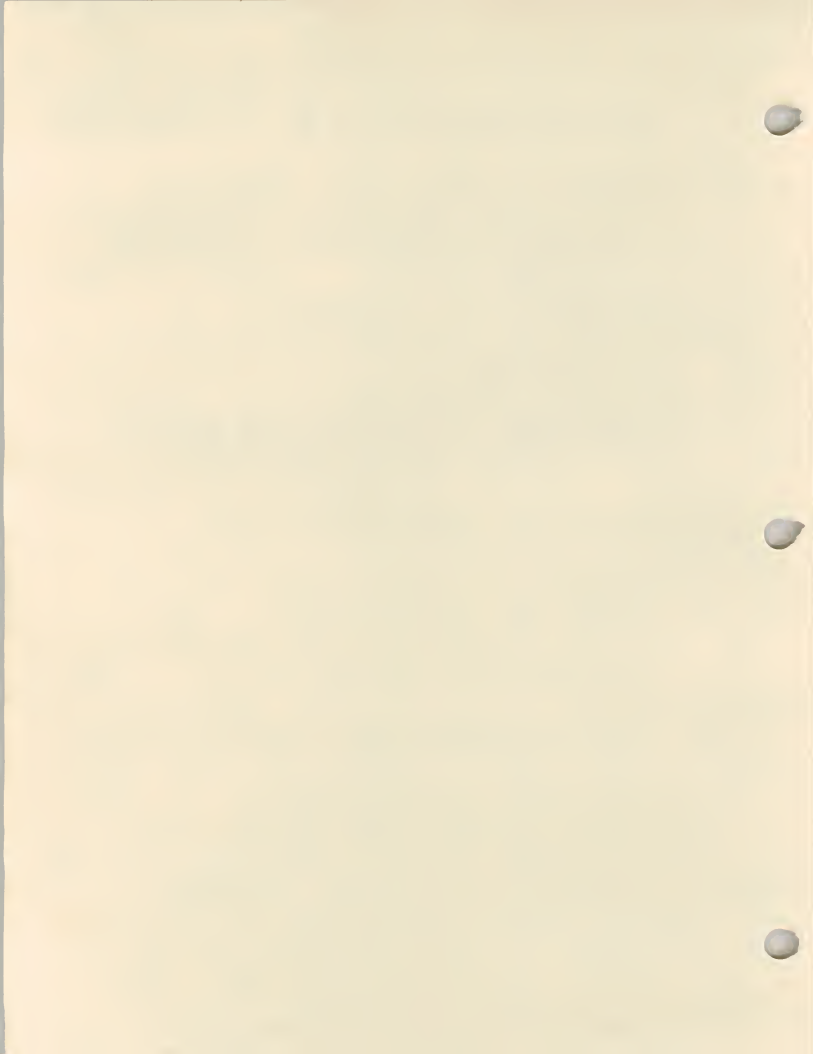
GEOGRAPHIC MARKETS

- The ANSYS package is available throughout the U.S. as well as in Canada, Japan, South Africa, Australia, West Germany, Sweden, France, the Netherlands, and Switzerland.
- Companies offering the software through their service bureaus include Boeing, Grumman, CHI, Computer Sciences, Control Data, General Electric, McDonnell Douglas, Multiple Access, Sun, Systems Dimensions, United Computing Systems, University Computing, Utility Network of America, and Westinghouse Electric.

COMPANY HIGHLIGHT/SWANSON ANALYSIS SYSTEMS, INC

COMPUTER HARDWARE AND SOFTWARE

- SASI uses the following in-house equipment for software testing and development:
 - Minicomputers
 - 1 Modcomp IV
 - 1 Prime 300
 - Terminals
 - 1 CDC 200 UT
 - 1 Cope 1200
 - 1 Tektronix 4010
 - 1 Tektronix 4006
 - 1 Texas Instruments Silent 735
- The CDC and Cope terminals have links to external service bureaus and client mainframes. The TI and Tektronix terminals are linked to these remote sites as well as the SASI in-house minicomputers.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1995

Sybase, Inc.

President & CEO : Mark B. Hoffman
Corporate Headquarters
6475 Christie Avenue
Emeryville, CA, USA 94608
Phone: (510) 922-3500
Fax: (510) 658-9441

Status:	Public
Employees :	4,016 (1/95)
Revenue:	\$ 693,806,000
Fiscal Year End:	12/31/94

Key Points

- Sybase, Inc., founded in 1984, develops, markets and supports a full line of relational database management software products and services for on-line applications for enterprise client/server computing environments.
- In February 1995, Sybase completed its acquisition of Powersoft Corporation, a developer of client/server development tools.

- In January 1995, Sybase formed the New Media division, that will focus on interactive multimedia solutions.
- In October 1994, Sybase acquired Expressway Technologies, a developer of advanced query processing performance enhancement technology.
- In January 1994, Sybase acquired OaSIS Group PLC, an international business re-engineering consulting firm, headquartered in the U.K. This acquisition has positioned Sybase to deliver business process re-engineering methodology and advanced client/server architecture for enterprise business solutions.

- In January 1994, Sybase announced the acquisition of Micro Decisionware, Inc., a Colorado-based provider of multiplatform database interoperability solutions. This acquisition positions Sybase to provide enhanced connectivity to mainframe-based applications.

Company Description

Sybase, founded in November 1984, develops, markets and supports a family of client/server-based software products and services for on-line, enterprise-wide client/server applications. Sybase's integrated family of software includes servers, tools, connectivity and administration/control products. The company also provides consulting, education and technical support services to its customers.

Sybase's product offerings include the following four major product families :

- SYBASE SQL Server™ products
- SYBASE Connectivity Interfaces and Gateways
- SYBASE System Management products
- SYBASE Application Development tools

Organization and Structure

Headquartered in Emeryville (CA), the company has major development, service and support facilities in Boulder (CO) and Burlington and Cambridge (MA). The company has 75 offices and 45 distributors in 49 countries.

Sybase markets its products and services internationally through foreign subsidiaries and distributors in Europe, Canada, Asia, Brazil, Latin America, Australia Malaysia, New Zealand and Singapore.

Sybase has its international offices in France, Germany, the Netherlands, Spain, Switzerland, United Kingdom, Canada and Japan.

Sybase is currently organized into five strategic business units for the core products and services groups as follows :

- The Tools Technology Group provides application development and management tools for enterprise systems.
- The Server and Connectivity Group designs and develops distributed database servers, interoperability products and systems administration software.
- The New Media Division, formed in February 1995, will develop and distribute software for the emerging interactive market.
- The Maintenance and Technical Support Group is the worldwide field organization that provides technical support to its customers worldwide.
- Consulting, Education and Training Group, also in the worldwide field organization, provides consultancy services and educational courses worldwide.

Company Strategy

Sybase will continue to base its products on advanced networking technologies. This has been the founding premise of the company.

The company is now focusing on the next step in the evolution of the client/server computing paradigm—enterprise client/server computing representing the integration of departmental and corporate information systems.

Sybase's strategy is to develop and acquire new products, increasing its international presence and expanding its distribution channel.

Sybase will continue to invest in several key areas to support future growth—new server and tools, product research and development; customer service and support; marketing programs; and the company's infrastructure.

Its February 1995 acquisition of Powersoft will enable Sybase to offer a suite of application development tools and take advantage of Powersoft's indirect channels of distribution.

The company's professional services will continue to be a critical, competitive advantage within the database industry. By consulting with customers, providing education and 24 hour technical support, Sybase intends to help its customers design solutions for real time business problems.

Sybase has been directing its energies toward the release of new and expanded products. The company believes that product development and engineering expenditures are essential for maintaining its leadership position in the enterprise client/server software market.

Financials

Total 1994 revenue reached \$693.8 million, a 63% increase over 1993 revenue of \$426.7 million. Net income rose 70%, from \$44.1 million in 1993 to \$75.2 million in 1994.

A five-year summary of source of revenue follows:

Sybase, Inc. Five-Year Financial Summary (\$ Millions, except per share data)

Item	Fiscal Year				
	1994	1993	1992	1991	1990
Revenue	\$693.8	\$426.7	\$264.6	\$160.6	\$103.9
• Percent change from previous year	63%	61%	65%	55%	78%
Income (loss) before taxes	\$121.3	\$71.2	\$39.5	\$13.8	\$(4.8)
• Percent change from previous year	70%	80%	186%	388%	--
Net income (loss)	\$75.2	\$44.1	\$23.7	\$9.9	\$(5.4)
• Percent change from previous year	71%	86%	139%	285%	--
Earnings (loss) per share	\$1.38	\$0.86	\$0.48	\$0.24	\$(0.15)
• Percent change from previous year	60%	79%	100%	260%	--

The strong revenue growth during 1993 is the result of increased software licenses of Sybase's products, reflecting the strength of

the client/server market and the increased commercial acceptance of Sybase's product offerings.

Other factors contributing to the revenue growth include:

- Strong market demand for SQL Server 10, WorkGroup SQL Server 10 and Replication Server.
- A sharp rise in Professional Services revenue.
- International revenues which increased 96% in 1994.

Research and development expenditures were approximately \$102.4 million (15% of revenue) in 1994, compared to \$66.2 million (16% of revenue) in 1993, and \$43.1 million (16% of revenue) in 1992.

Interim Results

Revenue for the first quarter ended March 31, 1995 was \$216 million, a 32% increase over \$163 million reported in the first quarter of 1994. Sybase reported a net loss of \$17.4 million in the first quarter, as compared to a net income of \$13.9 million for the same period a year ago.

The \$17.4 million loss included a one-time charge of \$25 million related to the purchase of Powersoft Corporation in February. In addition, the company's flagship database System 10 saw a drop in sales, which also contributed to the shortfall in the first quarter.

Market Financials

Sybase products are used primarily by organizations that seek to distribute databases. Although the products are used by all industries, the principal industries served include—financial services, manufacturing, telecommunications, healthcare, publishing, transportation, petrochemical and government agencies.

License revenue in 1994 rose 60% over that of 1993, to \$483.6 million. Services revenue in 1994 increased 68% over 1993, to \$210.2 million.

Approximately 70% of Sybase's 1994 revenue was derived from systems software products and associated maintenance services, and 30% from professional services. A three-year summary of source of revenue follows:

Sybase, Inc.
Three-Year Source of Revenue Summary
(\$ Millions)

Product/Service	Fiscal Year					
	1994		1993		1992	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Software products (license fees)	\$483.6	70%	\$301.8	71%	\$191.2	72%
Professional services (consulting, software development, education and training)	210.2	30%	124.9	29%	73.4	28%
Total	\$693.8	100%	\$426.7	100%	\$264.6	100%

Geographic Markets

Approximately 66% of Sybase's 1994 revenue was derived from North America, 25% from Europe and 9% from other intercontinental sources, including the Far East (primarily Japan and Hong Kong), Australia, Latin America and Mexico.

During 1994, overall international revenues increased 96% to \$238.8 million; European revenues increasing 81% to \$172.9 million; and other intercontinental revenues grew 152% to \$65.8 million. A three-year geographic source of revenue summary follows:

Sybase, Inc.
Three-Year Geographic Source of Revenue Summary
 (\$ Millions)

Item	Fiscal Year					
	12/94		12/93		12/92	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
North America	\$455.0	66%	\$305.2	72%	\$203.5	77%
Europe	172.9	25%	95.4	22%	51.8	20%
Intercontinental	65.8	9%	26.2	6%	9.3	3%
Total	\$693.8	100%	\$426.7	100%	\$264.6	100%

Acquisitions

Acquisitions made by Sybase during the past two years include the following:

- In February 1995, Sybase and Powersoft completed their merger, thus forming a company with over 5,000 employees worldwide.
 - Powersoft reported revenues of \$132.6 million in 1994.
 - The acquisition of Powersoft has provided Sybase with a suite of client/server development tools.
- In October 1994, Sybase acquired Expressway Technologies, a developer of advanced query processing performance enhancement technology. Expressway's technology serves as the basis for Sybase's IQ

Accelerator and Warehouse Works data warehousing framework.

- In January 1994, acquired OaSIS Group PLC, headquartered in the U.K. OaSIS is an international business re-engineering consulting firm.
- In January 1994, acquired Micro Decisionware, Inc. (MDI) of Boulder (CO). MDI provides multipatform database interoperability solutions.
- In September 1993, Sybase acquired Gain Technology, Inc., a vendor of multimedia, object-oriented software tools for the development and deployment of large-scale multimedia business applications. Gain™ products became part of Sybase's Tools Technology Group.

Employees

As of January 1, 1995, Sybase had 4,016 employees.

Key Products and Services

Sybase is a developer of relational database management software, products and services geared toward the enterprise client/server marketplace. The company offers a range of RDBMS servers, application development tools and connectivity software.

Its product portfolio is complemented by the comprehensive consulting and integration services provided by its professional services organization.

The SYBASE system consists of four product families—SQL Server Products, Client/Server Tools, Interoperability Products and System Management Products.

SQL Server Product Family:

Sybase's flagship product is the SYBASE SQL Server, a relational database featuring an advanced multithreaded architecture. SYBASE SQL Server is designed to deliver scalable high performance on the most cost-effective hardware, maintaining high transaction and query throughput while supporting large numbers of users. The newest release, the SYBASE SQL Server 10™ product is compatible with ANSI Standard SQL89 and has the ability to support very large databases. It also comes with new control and security features.

Other SYBASE SQL server products include:

- SYBASE SQL Server—A programmable RDBMS server.
- Microsoft SQL Server—A server developed in conjunction with Microsoft Corporation.

- SYBASE Secure SQL Server—A server with multilevel security control.
- SYBASE International Language Kit—Allows for foreign language customization.

The SYBASE Replication Server—Designed to maintain synchronized copies of distributed data at multiple sites, ensuring the reliable delivery of data and transactions.

The SYBASE Navigation Server—Designed to allow applications to grow by scaling the system to support terabytes of data, thousands of transactions per second and thousands of users.

The SYBASE Backup Server—Included with each copy of the SQL Server and provides a state-of-the-art solution for high-speed, on-line backup, loading and recovery. It supports high-volume, remote, and unattended backup and can trigger automatically when a predetermined threshold has been reached.

Interoperability Product Family:

SYBASE connectivity interfaces and gateways are a set of software programming tools that enable information that is different in format, distributed in location and stored in disparate computing systems to be integrated easily and transparently for use in on-line applications. These connectivity products are based on its client/server messaging protocol which consists of multidialect SQL statements and RPCs.

Open Client/Server interfaces include the following :

- Open Client—Application programming interface for developing applications and tools that access the SYBASE SQL server or Open Server

- Open Server—Application programming interface for developing gateways to other DBMSs, data sources and services
- Open Server for CICS—Allows CICS applications on IBM/MVS mainframe to become servers to SYBASE environment
- Open Client for CICS—Allows IBM 3270 users and CICS applications to access heterogeneous, client/server LAN-based data, services and applications
- PC Net-Library—Provides multivendor network support for MS-DOS, OS/2 or MS Windows applications
- Net-Gateway—Allows SYBASE databases on workstations and PCs to access IBM mainframe databases through existing LANs
- Open Gateway for DB2—Transparent gateways from SYBASE SQL Server and Open Client applications to DB2 databases
- Gateway Services—Transparent gateways from SYBASE SQL Server and Open Client applications to Oracle, Rdb, Ingres and Informix Databases
- SYBASE SQL toolset includes—APT Workbench (for prototyping and development of form-based applications); Data Workbench (for graphical database administration and decision support); and SQL Workbench (for mainframe-caliber production reporting).
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System Management Product Family:

This family of products is designed to provide operational control in distributed environments. The family currently consists of the following products :

- SYBASE Backup Server—Bundled with each copy of the SQL Server. It provides a state-of-the-art solution for high-speed, on-line backup, loading and recovery.
- SYBASE SA Companion—A tool for administration of the SQL Server environment. It provides an interface for performing SQL Server operational control activities.

Client/Server Tools Family:

Sybase's client/server-based application development tools enable users to develop, use and manage a variety of on-line and decision support applications within client/server environments.

- Sybase's Delt Modeling tool products provide forward and reverse engineering capabilities for a variety of SQL databases. They are designed to simplify and automate the process of analyzing and modeling databases and business processes.

- **SYBASE SQL Monitor**—Provides a comprehensive set performance statistics so system managers can easily evaluate the operation of the SQL Server.

After its merger with Powersoft, Sybase acquired the Powersoft Enterprise Series of application development tools that includes:

- **PowerBuilder Enterprise**—An object-oriented client/server development tool that provides connectivity to front-end design tools and enterprise-wide, back-end data servers.
- **PowerBuilder Desktop**—A desktop version of PowerBuilder that provides access to broader team development and enterprise database connectivity through the following add-on options:
 - **PowerBuilder Team/ODBC Kit**—Provides ODBC desktop support, server ODBC Driver Kit, open library application programming interface (API) and version control interfaces.
 - **PowerBuilder Database Kit**—Provides access to the native drivers of several server databases.
 - **PowerBuilder Application Library**—Provides a collection of tools for the development, documentation and maintenance of PowerBuilder applications.
 - **PowerBuilder Developer Toolkit**—Provides a collection of pre-optimized objects, windows and functions for the development of PowerBuilder applications.
- **PowerMaker**—A personal client/server development tool that enables the creation of queries, forms, reports and business graphs.
- **PowerViewer**—A personal client/server information access tool that enables the

creation of queries, reports and business graphs which access local data and enterprise data through ODBC.

Other new products introduced by Sybase during the past year include:

- **SYBASE Intermedia™**—Provides an interoperable software architecture for interactive multimedia systems. Products include:
 - **Gain Momentum**—An object-oriented, multimedia authoring environment for the development of visual, intuitive and entertaining applications.
 - **Gain Interplay**—A software designed to allow interactive multimedia applications to run on hardware devices such as television set-top boxes and home personal computers.
 - **Intermedia Server**—Based on Sybase's SQL Server RDBMS technology, it provides control and message integration.
- **Warehouse WORKS™**—A framework for client/server-based data warehousing.
- **SYBASE IQ Accelerator™**—A key component of Warehouse WORKS, it is a transparent, optional extension to the SQL Server 10 that provides enhanced, interactive query performance through query indexing.

Professional Services

The Sybase Professional Services organization, formerly SQL Solutions, Inc., was established in 1986 as a professional services and software development firm specializing in distributed, interoperable SQL-based solutions. The organization assists its clients in solving the complex issues associated with designing and implementing client/server applications in

multiapplication, multihardware and distributed database environments.

Sybase Professional Services offers expertise in four main areas :

- Enterprise Client/Server Architecture Design, where a team of client/server architects and strategists work at the CIO level to plan a migration to distributed, enterprise-wide client/server computing.
- Client/Server Application Development, where consultants work with a client's team to design, develop and deploy client/server applications.
- Education offered through Sybase covers every aspect of Sybase technology. The curriculum is delivered on-site or at 35 training centers worldwide. Education programs can be tailored to meet a client's specific needs.
- Product Specialist Programs integrate education, hands-on workshops, and joint design and development of pilots based on the client's requirements.

In April 1995, Sybase announced SYBASE® Industry Solutions, a focused approach for delivering solutions to customers in industries such as healthcare, oil and gas, telecommunications, insurance and financial services. The program will deliver information solutions by combining vertical industry expertise, partnerships and an open client/server architecture.

Clients

As of December 1994, Sybase had more than 17,200 customer sites worldwide.

- Major international organizations, such as AT&T, General Electric, La Poste, Mercedes-Benz, Nippon Express, Paine-Webber and

Pepsi-Cola Co., have implemented the SYBASE architecture.

- J.P. Morgan and Sanwa Bank are Sybase customers from the commercial and investment banking industry.

Marketing and Sales

Sybase markets its software and services primarily through its direct sales organization, complemented by other sales channels including a telesales organization, international distributors, value-added remarketers (VARs), systems integrators (SIs) and original equipment manufacturers (OEMs).

- The company markets its products and services primarily through its 75 field sales offices worldwide and 41 distributors in 45 countries.
- In addition, Sybase locates technical specialists in the field to support the direct sales force on technical issues during the selling process.
- Sybase's indirect sales channel consists of over 1,800 SIs, VARs and ISVs that are included in its Open Solutions Program, and the following OEMs : IBM, DEC, Hewlett-Packard, Pyramid, AT&T, Data General and Microsoft.

In the international marketplace, Sybase markets its products through direct sales organizations of its subsidiaries and through distributors that license and support SYBASE products in France, Germany and the U.K.

- An Australian distributor provides support services to users in Australia and to Sybase's subsidiary in the Far East—excluding Japan.

- Sybase's Japanese subsidiary markets and supports distributors of the company's products and services in Japan.
- Sybase licenses its products through its distributors in the balance of Europe, Asia and in Latin America.

Sybase provides support to independent software vendors, systems integrators, VARs and others in developing and marketing software products that are compatible with Sybase products. The company also markets and supports selected third-party tools to its customers worldwide.

- Sybase provides technical support for North America, Latin America and Asia/Pacific, primarily from its support centers in Emeryville (CA), Burlington (MA) and Tokyo (Japan).
- In Europe, support is provided from the company's support centers in France, Germany, Switzerland, the Netherlands and the U.K.
- Education centers are located in the U.S., Australia, Canada, France, Germany, Switzerland, the Netherlands and the U.K.

Alliances

In May 1995, Sybase and Compaq entered into an agreement to deliver Sybase's client/server software solutions that are optimized for Compaq's application servers.

In May 1995, Sybase teamed up with Microware Systems Corporation in an effort to speed the delivery of interactive television applications. Sybase's Intermedia product family will now support Microware's interactive television operating system environment called DAVID.

In April 1995, Sybase entered into a partnership with Science Applications International Corporation (SAIC). The two companies have agreed to work together to develop a client/server infrastructure targeting the commercial healthcare information systems market.

In March 1995, Sybase and Silicon Graphics agreed to work together to provide solutions for the World Wide Web. According to the agreement, the SYBASE SQL Server 10 database will be integrated with Silicon Graphics' WebFORCE™ CHALLENGE™ servers, enabling users to browse information on the Web and perform information management functions as well.

In March 1995, Sybase announced its development and marketing agreement with IBM, to deliver client/server products on IBM's OS/2 operating system for Intel and PowerPC architectures.

In November 1994, Sybase formed an alliance with Texas Instruments' (TI) software division, to provide a complete solution for enterprise-wide application development. TI's software division became a participant in Sybase's Open Solutions Program, a channel program for ISVs.

Competition

Sybase's primary independent software vendor competitors include :

- Oracle Corporation
- Informix Corporation
- ASK Computer Systems, Inc. (Computer Associates, Inc.)

Sybase's hardware vendor competitors are :

- Digital Equipment Corporation
- IBM

Secondary competitors include—Gupta, RAIMA, Objectivity, Ontos, Rational, Servio, Montage, Uniface and Unify.

Sybase Professional Services competes with other RDBMS vendors and consultants such as:

- Andersen Consulting
- Electronic Data Systems

INPUT Assessment

Sybase's major strengths include :

- A large and well established company
- Aggressive and effective sales and marketing
- Leading technology

Sybase is currently the number two independent RDBMS vendor, with 1994 revenues of \$694 million.

Sybase is in the fastest growth tier of DBMS companies. Revenue growth from 1993 to 1994 was 63%.

For the first quarter of 1995, the company posted its first quarterly loss since going public in 1991. The period saw an unexpected drop in sales of Sybase's flagship database—System 10. Sybase's performance in 1995 will definitely be influenced by System 11, the much-awaited follow-on database to System 10 that is scheduled to be available sometime during the third quarter of 1995. A challenge for Sybase will be to sustain the growth the company has experienced over the years.

Sybase's historical weakness had been application development tools. The company has addressed this through acquisitions of companies such as Powersoft and Gain Technology, which have added a suite of tools to the company's product offerings.



Company Profile

A Publication from INPUT's Vendor Analysis Program

April 1994

Sybase, Inc.

President & CEO : Mark B. Hoffman
Corporate Headquarters
6475 Christie Avenue
Emeryville, CA, USA 94608
Phone: (510) 922-3500
Fax: (510) 658-9441

Status:	Public
Employees :	2,500 (1/94)
Revenue:	\$ 427,000,000
Fiscal Year End:	12/31/93

Key Points

- Sybase, Inc., founded in 1984, develops, markets and supports a full line of relational database management software products and services for on-line applications for enterprise client/server computing environments.
- In 1993, Sybase reached a record \$427 million in revenues, a 61% increase over 1992.
- Sybase's 1993 operating margins of 16% contributed to record net income of \$44.1 million, up 86% from 1992.
- In January 1994, Sybase acquired OaSIS Group PLC, an international business re-engineering consulting firm, headquartered in the U.K. This acquisition has positioned Sybase to deliver business process re-engineering methodology and advanced client/server architecture for enterprise business solutions.
- In January 1994, Sybase announced the acquisition of Micro Decisionware, Inc., a Colorado-based provider of multiplatform database interoperability solutions. This

acquisition positions Sybase to provide enhanced connectivity to mainframe-based applications.

- In 1993, Sybase announced the availability of Sybase's System 10™ enterprise client/server family of products.
- 1993 was also highlighted by the company's announcement of its major new tools initiative and tools product family, Sybase *Momentum*™, designed to meet the complex development requirements for enterprise client/server applications.

Company Description

Sybase, founded in November 1984, develops, markets and supports a family of client/server-based software products and services for on-line, enterprise-wide client/server applications. Sybase's integrated family of software includes servers, tools, connectivity and administration/control products. The company also provides consulting, education and technical support services to its customers.

Structure and Operations

Sybase operates in one industry segment, the development and marketing of computer software and related services, and markets its products and services internationally through foreign subsidiaries and distributors in Europe, Canada, Asia, Latin America and Australia. Headquartered in Emeryville (CA), the company has offices in France, Germany, the Netherlands, Spain, Switzerland, United Kingdom, Canada and Japan.

Sybase's product offerings include the following four major product families :

- SYBASE SQL Server™ products
- SYBASE Connectivity Interfaces and Gateways
- SYBASE System Management products
- SYBASE Application Development tools

Sybase is currently organized into four strategic business units for the core products and services groups as follows :

- The Tools Technology Group provides application development and management tools for enterprise systems.
- The Server and Connectivity Group designs and develops distributed database servers, interoperability products and systems administration software.
- The Maintenance and Technical Support Group is the worldwide field organization that provides technical support to its customers worldwide.
- Consulting, Education and Training Group, also in the worldwide field organization, provides consultancy services and educational courses worldwide.

Company Strategy

Sybase will continue to base its products on advanced networking technologies. This has been the founding premise of the company.

The company is now focusing on the next step in the evolution of the client/server computing paradigm—enterprise client/server computing representing the integration of departmental and corporate information systems.

Market Strategy:

With its strong financial performance in 1993, Sybase will continue to invest in several key areas to support future growth: new server and tools, product research and development; customer service and support; marketing programs; and the company's infrastructure.

The January 1994 acquisition of OaSIS Group PLC, a re-engineering consulting firm, has uniquely positioned Sybase to deliver business process re-engineering methodology and advanced client/server architecture for enterprise business solutions.

The company's professional services will continue to be a critical, competitive advantage within the database industry. By consulting with customers, providing education and 24 hour technical support, Sybase intends to help its customers design solutions for real time business problems.

Product Strategy:

Sybase has been directing its energies toward the release of new and expanded products. The company believes that product development and engineering expenditures are essential for maintaining its leadership position in the enterprise client/server software market.

Financials

Total fiscal 1993 revenue reached \$427.0 million, a 61% increase over fiscal 1992 revenue of \$264.6 million. Net income rose 86%, from \$23.7 million in fiscal 1992 to \$44.1 million in fiscal 1993.

License revenues in fiscal 1993 rose 58% over those of fiscal 1992, to \$301.9 million. Service revenues increased 70% in fiscal 1993 over those of fiscal 1992, to \$125.1 million.

International revenues surged 99% (116% in local currencies) to \$121.5 million in fiscal 1993, with European revenues increasing 84% to \$95.4 million and other international revenues expanding 182% over fiscal 1992.

A five-year financial summary can be found on the following page:

Sybase, Inc.
Five-Year Financial Summary
 (\$ Millions, except per share data)

Item	Fiscal Year				
	1993	1992	1991	1990	1989
Revenue	\$427.0	\$264.6	\$160.6	\$103.9	\$58.3
• Percent change from previous year	61%	65%	55%	78%	143%
Income (loss) before taxes	\$71.2	\$39.5	\$13.8	\$(4.8)	\$3.8
• Percent change from previous year	80%	186%	388%	--	*
Net income (loss)	\$44.1	\$23.7	\$9.9	\$(5.4)	\$3.6
• Percent change from previous year	86%	139%	285%	--	*
Earnings (loss) per share	\$1.72	\$0.96	\$0.47	\$(0.31)	\$0.22
• Percent change from previous year	79%	104%	252%	--	*

* Percent change exceeds 1000%.

The strong revenue growth during fiscal 1993 is the result of increased software licenses of Sybase's products, reflecting the strength of the client/server market and the increased commercial acceptance of Sybase's product offerings.

Research and development expenditures were approximately \$66.2 million (15.6% of revenue) in fiscal 1993, compared to \$43.1 million (16.3% of revenue) in fiscal 1992, and \$27.2 million (16.9% of revenue) in fiscal 1991.

Interim results: Revenue for the three months ending March 31, 1994 reached \$137.9 million, a 72% increase over \$80.1 million for the same fiscal period in 1993. Net income for the period rose 86%, from \$6.2 million to \$11.6 million.

Sybase's high first quarter revenues in fiscal 1994 were a result of increased

worldwide acceptance of its products and a strong demand for the recently introduced SYBASE System10 family of products.

Market Financials

Sybase products are used primarily by organizations that seek to distribute databases. Although the products are used by all industries, the principal industries served are: financial services, manufacturing, telecommunications, aerospace, defense and government agencies. Emerging market segments include healthcare and pharmaceutical, media and publishing, transportation and utilities.

Approximately 71% of Sybase's fiscal 1993 revenue was derived from systems software products and associated maintenance services, and 29% from professional services. A three-year summary of source of revenue follows on the next page :

Sybase, Inc.
Three-Year Source of Revenue Summary
 (\$ Millions)

Item	Fiscal Year					
	1993		1992		1991	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Software products (license fees)	\$301.9	71%	\$191.2	72%	\$116.2	72%
Professional services (consulting, software development, education and training)	125.1	29%	73.4	28%	44.4	28%
Total	\$427.0	100%	\$264.6	100%	\$160.6	100%

Geographic Markets

Approximately 72% of Sybase's fiscal 1993 revenue was derived from the U.S., 22% from Europe and 6% from other international sources, including the Far East (primarily Japan and Hong Kong), Australia, Latin America and Mexico.

Fiscal 1993 international revenues increased 99% (116% in local currencies) to \$121.5 million, with European revenues increasing 84% to \$95.4 million and other international revenues expanding 182% over fiscal 1992.

A three-year geographic source of revenue summary follows:

Sybase, Inc.
Three-Year Geographic Source of Revenue Summary
 (\$ Millions)

Item	Fiscal Year					
	1993		1992		1991	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$305.2	72%	\$203.5	76%	\$123.1	77%
Europe	95.4	22%	51.8	20%	29.0	18%
Other	26.1	6%	9.3	4%	8.5	5%
TOTAL	\$426.7	100%	\$264.6	100%	\$160.6	100%

Acquisitions

Acquisitions made by Sybase during the past two years include the following:

- In January 1994, Sybase announced its acquisition of OaSIS Group PLC, headquartered in the U.K. OaSIS is an international business re-engineering consulting firm.
- In January 1994, Sybase announced the acquisition of Micro Decisionware, Inc. (MDI) of Boulder (CO). MDI provides multiplatform database interoperability solutions.
- In September 1993, Sybase acquired Gain Technology, Inc., a vendor of multimedia, object-oriented software tools for the development and deployment of large-scale multimedia business applications. Gain™ products became part of Sybase's Tools Technology Group.

Employees

As of January 1, 1994, Sybase had approximately 2,500 employees.

Key Products and Services

Sybase is a developer of relational database management software, products and services geared toward the enterprise client/server marketplace. The company offers a broad range of RDBMS servers, application development tools and connectivity software. This product portfolio is complemented by its comprehensive consulting and integration services provided by its professional services organization. The SYBASE system consists of four product families :

SQL Server Products, Client/Server Tools, Interoperability Products and System Management Products.

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The company provides technical support for North America, Latin America and Asia/Pacific, primarily from its support centers in Emeryville (CA), Burlington (MA) and Tokyo (Japan). In Europe, support is provided from the company's support centers in France, Germany, Switzerland, the Netherlands and the U.K. Education centers are located in the U.S., Australia, Canada, France, Germany, Switzerland, the Netherlands and the U.K.

Clients

Major international organizations, such as AT&T, General Electric, La Poste, Mercedes-Benz, Nippon Express, Paine-Webber and Pepsi-Cola Co., have implemented the SYBASE architecture. J.P. Morgan and Sanwa Bank are Sybase customers from the commercial and investment banking industry.

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There has been an increasing emphasis on indirect sales channels including Open Solutions Partners, 305 Independent Software Vendors (ISVs), 320 VARs, 100 SIs and the following OEMs: IBM, DEC, Hewlett-Packard, Pyramid, AT&T, Data General and Microsoft.

The company markets its products and services in the U.S. and Canada primarily through its 29 field sales offices located throughout the U.S. and in Canada.

In the international marketplace, the company markets its products through direct sales organizations of its subsidiaries and through distributors that license and support SYBASE products in France, Germany and the U.K. An Australian distributor provides support services to endusers in Australia and to Sybase's subsidiary in the Far East—excluding Japan. The Japanese subsidiary markets and supports distributors of the company's products and services in Japan.

Sybase licenses its products through its distributors in the balance of Europe, Asia and in Latin America. Sybase provides support to independent software vendors, systems integrators, VARs and others in developing and marketing software products that are compatible with Sybase products. The company also markets and supports selected third-party tools to its customers worldwide.

Competition

Sybase's primary independent software vendor competitors include:

- Oracle Corporation

- Ingres Corporation, a subsidiary of ASK Computer Systems, Inc.

- Informix Corporation

Sybase's hardware vendor competitors are :

- Digital Equipment Corporation
- IBM

Secondary competitors include : Gupta, RAIMA, Objectivity, Ontos, Rational, Servio, Montage, Uniface and Unify.

The company's subsidiary, SQL Solutions, competes with other RDBMS vendors and consultants such as :

- Andersen Consulting
- Electronic Data Systems

The competitive factors for the company's products include: architecture, performance, functionality, product quality, customer support, brand name and price.

Input Assessment

- Sybase is currently the number two independent RDBMS vendor, with 1993 revenues of \$427 million.
- Sybase is in the fastest growth tier of DBMS companies. Revenue growth from 1992 to 1993 was 61%.
- Sybase's historical weakness has been application development tools. The company is addressing this through recent acquisitions.

COMPANY PROFILE

SYBASE, INC.

6475 Christie Avenue
Emeryville, CA 94608
(415) 596-3500

Mark B. Hoffman, President and
CEO
Public Company, NASDAQ
Total Employees: 1,001 (6/91)
Total Revenue, Fiscal Year End
12/31/90: \$103,067,000

The Company

Sybase, founded in November 1984, develops, markets, and supports the SYBASE relational data base management system, development tools, and network products. Sybase also provides associated professional services through its wholly owned subsidiary, SQL Solutions.

- Sybase was founded to provide data base management systems that support on-line transaction processing. The company's current strategy focuses on high performance client/server-based products and services.
- Sybase targets companies building on-line applications in networked computing environments. These applications--which use computers to obtain realtime access to data to perform critical, transaction-oriented functions integral to the operations of the company--include securities trading, just-in-time (JIT) manufacturing, telecommunications network management, and military command and control.
- Since its founding, Sybase has secured venture capital funding from the following companies: Apple Computer, Charles River Ventures, Hambrecht & Quist, Kleiner Perkins Caufield & Byers, Lotus Development Corp., Oak Investment Partners, T. Rowe Price, TRW, Brentwood Associates, Chancellor Capital Management, and Highland Capital Partners.

In August 1991, Sybase made an initial public offering of 3.5 million shares of its common stock. Of the estimated net proceeds of \$22.5 million, \$3.9 million will be used to repay outstanding debt and to fund possible future acquisitions.

Sybase made two key acquisitions in 1990 and 1991:

- In January 1990, the company acquired D&N Systems, Inc. of Burlington (MA), a professional services firm that specializes in relational data base applications.
 - At the time of the acquisition, D&N had 100 employees. INPUT estimates D&N's 1989 revenues at \$5.4 million.
 - D&N Systems now operates as SQL Solutions, Inc., an independent subsidiary of Sybase.
- In April 1991, Sybase acquired Deft, Inc., a Toronto-based vendor of front-end CASE design tools. Deft had 22 employees at the time of the acquisition.
 - Deft's tools run on Apple Macintosh computers and are used for designing relational data base applications for UNIX and DEC VAX platforms. The tools are known for their reverse-engineering capabilities and ability to build applications that run on multiple relational data bases.
 - The Deft tools are now directly marketed and supported by SQL Solutions.

Sybase's 1990 revenue reached approximately \$103 million, an 80% increase over 1989 revenue of \$57 million. This increase was attributed primarily to increased sales volume, growth in international markets, and the acquisition of the SQL Solutions services business.

Despite the large increase in revenue, the company suffered a net loss of \$6 million, compared to net income of \$3.4 million for 1989. A five-year financial summary follows:

**SYBASE, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	1990	1989	1988	1987	1986
Revenue	\$103.1	\$57.3	\$24.1	\$6.0	\$1.1
• Percent increase (decrease) from previous year	80%	138%	302%	445%	N/A
Income (loss) before taxes	\$(5.8)	\$3.4	\$0.1	\$(7.4)	\$(2.8)
• Percent increase (decrease) from previous year	(271%)	*	(101%)	(164%)	N/A
Net income (loss)	\$(6.0)	\$3.4	\$0.1	\$(7.4)	\$(2.8)
• Percent increase (decrease) from previous year	(276%)	*	(101%)	(164%)	N/A
Earnings (loss) per share	\$(0.04)	\$0.24	\$0.01	\$(0.76)	\$(0.41)
• Percent increase (decrease) from previous year	(117%)	*	(101%)	(85%)	N/A

* Percent change exceeds 1,000%.

Sybase began shipping products in volume in May of 1987, three years after its founding. Although the five-year financials released with the company's first stock offering show impressive revenue growth, net earnings have not been consistent.

- The company had two profitable years, in 1988 and 1989. In 1990, however, despite revenue growth of 80%, the company suffered a net loss of approximately \$6 million, due primarily to expenses incurred in building the company sales organization during the first two quarters of the year. Sales and marketing expenses rose to 92.8% and 86.2% of revenues, respectively, in the first and second quarters of 1990.
- Management's response to the losses in the first half of 1990 was to reorganize the North American sales organization toward increased productivity and tightened expense controls. Headcount of this organization was also reduced. Following these changes, Sybase experienced two profitable quarters in the second half of 1990, although these gains did not offset the large losses incurred in the previous six months.

Sybase has consistently spent a large percentage of its total revenues on research and development. These expenses were \$20.8 million (20.1% of total revenue) in 1990, compared to \$12.0 million (21% of revenue) in 1989, and \$6.3 million (26% of revenue) in 1988.

Sybase has a range of agreements with various hardware and software vendors, as follows:

- Sybase has OEM agreements with Stratus Computer, Inc. and NeXT, Inc. Sybase also has development and/or marketing agreements with IBM, DEC, HP, Sequent, Pyramid, AT&T, Data General, NCR, and Microsoft Corporation.
- Sybase has established a strategic software partners program to provide their customers with additional tools that can access SYBASE data. Current software partners include: Natural Language Incorporated, Network Innovations Corporation, DB/ACCESS, Ashton-Tate, Lotus Development Corp., Borland International, Fortex, Inside Automation, National Information Systems, Unify, BIM, Gold Hill Computers, Neuron Data, IDE, 20/20, SPSS, Uniface, Verity, V.I. Corporation, and Information Builders.
- Sybase has a technology and marketing agreement with Microsoft that has resulted in an OS/2 version of the SYBASE SQL Server. The version is called Microsoft SQL Server.
 - Under this agreement, the two companies work together to optimize the OS/2 version of SQL Server, and to develop distribution, support, and marketing programs for this product.
 - Microsoft and its distributors market and support the product to Microsoft customers, and the Sybase sales force markets and supports Microsoft SQL Server to the Sybase customer base for use with other Sybase products.
- In 1991, Sybase established the Sybase Open Solution Program for Manufacturing, a program of alliances aimed at supporting the company's customer base in the manufacturing industry. As part of this program, Sybase has formed partnerships with over 30 manufacturing software vendors (including Interactive Information Systems, Inc., MainStream Software Corp., and Powersoft Corp.) and systems integrators such as Andersen Consulting and Coopers and Lybrand.

As of June 30, 1991, Sybase had 1,001 employees, segmented as follows:

Marketing/sales	627
Product development and engineering	268
General and administrative	<u>106</u>
	1,001

Sybase's primary competitors include the following:

- Software competitors fall into two primary areas, as follows:
 - Software vendors offering relational data base management systems. Primary competitors in this category are: Oracle Corporation and ASK (Ingres). Other significant competition comes from Informix Corp. and Ashton-Tate (Interbase). Sybase hopes its early move into the rapidly growing technologies of online transaction processing and distributed computing will help the company prevail over substantial competition.
 - Hardware vendors, such as DEC and IBM, that offer software. As these vendors become more serious about software sales, Sybase sees them as a growing threat.
- Sybase's professional services subsidiary, SQL Solutions, competes with other RDBMS vendors as well as other consultants, such as Andersen Consulting and Electronic Data Systems (EDS).

Key Products and Services

INPUT estimates approximately 90% of Sybase's 1990 revenue was derived from systems software products and associated maintenance services and 10% from professional services.

A three-year summary of source of revenue, as provided by Sybase, follows:

SYBASE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)

	FISCAL YEAR					
	1990		1989		1988	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software license fees	\$75.2	73%	\$45.5	79%	\$19.2	80%
Maintenance and contract services	27.9	27%	11.8	21%	4.9	20%
TOTAL	\$103.1	100%	\$57.3	100%	\$24.1	100%

Software Products:

Sybase's product offerings are summarized in Exhibits A, B, and C and include the following three major product families:

- SYBASE SQL Server™ products
- SYBASE Connectivity Interfaces and Gateways
- SYBASE SQL Lifecycle products

Sybase products support a wide variety of client/server platforms and Sybase provides connectivity to other platforms with large installed bases, but not every product runs on all of the platforms supported. A list of platforms supported follows:

- DEC VAX processors under VMS
- The following UNIX platforms: DEC, HP, IBM, Pyramid, Sequent, Sun, AT&T, NCR, Data General, and NeXT
- Stratus, OS/2, DOS, and Macintosh

EXHIBIT A

SYBASE SQL SERVER PRODUCT FAMILY

PRODUCT NAME	DESCRIPTION
SYBASE SQL Server	High-performance, programmable RDBMS server for on-line, client/server applications
Microsoft SQL Server	SYBASE SQL Server developed jointly with Microsoft for OS/2
SYBASE Secure SQL Server	SYBASE SQL Server for multilevel security control. Meets National Computer Security Center B1-level requirements
SYBASE SQL Server/CFT	Fault-tolerant SYBASE SQL Server for DEC VAX clusters
SYBASE International Language Kit	Provides foreign-language customization for SYBASE SQL Server

EXHIBIT B

SYBASE CONNECTIVITY PRODUCT FAMILY (a)

PRODUCT NAME	DESCRIPTION
Open Client	Application programming interface for developing applications and tools that access the SYBASE SQL Server or applications of the Open Server
Open Server	Application programming interface for developing gateways to other DBMSs, data sources, and services
Open Server for CICS	Allows CICS application on IBM/MVS mainframe to become a server to the SYBASE environment
PC Net-Library	Multivendor network support for MS-DOS, OS/2, or MS-Windows applications
Net-Gateway	Allows SYBASE data bases and applications running on workstations and PCs to access IBM mainframe applications and data bases through existing LANs
Open Gateway for DB2	Transparent gateways from SYBASE SQL Server and Open Client applications to DB2 data bases
Gateway Services	Transparent gateways from SYBASE SQL Server and Open Client applications to ORACLE, Rdb, and INGRES data bases

(a) Designed for multivendor RDBMS environments.

EXHIBIT C

SYBASE SQL LIFECYCLE PRODUCT FAMILY

PRODUCT NAME	DESCRIPTION
Application Analysis and Design DEFT (a)	Multi-RDBMS CASE tools for data base, data flow, and application program modeling and data base reverse engineering
Application Development APT Workbench - APT-Edit - APT-SQL - APT-Build - APT-Execute Data Workbench - Interactive SQL - VQL (Visual Query Language) - Report Workbench - Report Execute - Data Entry - Utilities Embedded SQL SQR (a) (b) Easy SQR (a) (b) SQR Developer's Kit (a) TOP*PL/SQL Converter (b)	Application productivity tools for forms-based applications Graphic editor for defining forms layout Fourth-generation language for defining forms logic and processing Prototyping and automatic application generation tool Run-time system for applications deployment Graphical data base administration, reporting, and decision support tools Interactively executes SQL transactions and stored procedures Point-and-pick user Interfaces for SQL queries Defines, saves, and runs reports Run-time system to execute predefined reports Generates forms for data retrieval, update, and deletion Loads and retrieves data and checks data consistency Precompilers for embedding SQL into programming languages Procedural report writer and fourth-generation language Query builder and report generator SQR debugging environment Converts ORACLE applications to new ORACLE releases

(continued)

**EXHIBIT C
(cont.)****SYBASE SQL LIFECYCLE PRODUCT FAMILY**

PRODUCT NAME	DESCRIPTION
Debugging and Testing	
SQL Advantage (a)	SQL development and editing environment
SQL Debug (a)	Multi-RDBMS interactive SQL source-level debugger
Operational Control	
SA Companion	Operational control environment for SYBASE system administrators
DBA Companion Environment	Operational control environment for ORACLE system administration:
- Resource Manager	Storage and capacity management
- Application Manager	Application management and security
- Database Analyzer	Analysis and exception reporting

(a) Designed for multivendor RDBMS environments

(b) Remarketed by SQL Solutions under license from the manufacturer

In 1990, Sybase released its first multilevel secure data base management system.

- Secure SQL Server™, released in February 1990, is a multilevel secure relational data base management system designed to meet the National Computer Security Center's B1-level security requirements.
- The Secure SQL Toolset™, released in March 1990, is a set of application development tools for building Secure SQL Server applications.
- Secure SQL Server runs on DEC VAX hardware under ULTRIX. The Secure SQL Server Toolset may be used on SEVMS (Secure VMS), VMS, ULTRIX, and Sun OS/MLS (Multi-Level Secure Operating System) clients while accessing the Secure SQL Server on an ULTRIX server.
- A Secure SQL Server B2 version is planned to run on bare hardware, with its own built-in operating system.

Pricing for SYBASE systems varies based on the platform they will run on, with the low end being the smaller UNIX workstations and the high end the largest DEC VAX platforms.

- Price ranges for the three SYBASE product groups are as follows: SQL Server from \$4,500 to \$300,000; SQL Lifecycle products from \$1,710 to \$144,000; and Connectivity products from \$540 to \$90,000. Prices for individual products vary depending on platform, products purchased, and discounting.
- Secure SYBASE products have a separate range of prices, with Secure SQL Server priced between \$46,000 and \$462,000, depending on the hardware platform. Secure Lifecycle product prices range from \$1,800 to \$123,800, depending on the product components and platform.

Sybase reported having licensed its system to over 2,000 customer sites as of June 30, 1991, an increase of 570% over two and a half years (approximately 350 sites were reported in early 1989).

Professional Services:

Since 1990, Sybase has offered professional services through its SQL Solutions business unit. SQL Solutions, formed through the acquisition of D&N Systems, specializes in SQL integration services and SQL productivity tools for the client/server environment. As of

1990, the business unit had over 300 customer sites in the Fortune 1000 market. SQL Solutions' 1990 revenues were approximately \$15 million.

- SQL Solutions personnel have expertise with multiple relational data base systems, including SYBASE, ORACLE, Rdb, INGRES, INFORMIX, AND DB2. They specialize in RDBMS applications in heterogeneous hardware and distributed data base environments.
- Services include strategic business analysis and modeling, information architecture and resource planning, custom system design and development, performance and migration services, system administration, and SQL and RDBMS training.
- SQL Solutions directly markets and supports a number of SQL productivity tools that operate across major computing platforms and RDBMSs. Tools include the Deft CASE tools, acquired in April 1991, as well as other tools for systems development and implementation, performance tuning, and operational control.
- SQL Solutions has a number of its own strategic marketing and technology partnerships with software, hardware, and consulting firms.
 - Software partners include Banyan Systems, Microsoft, Lotus Development Corp, and Natural Language, Inc.
 - Hardware vendor relationships include Informix, Stratus, Sequent, IBM, DEC, SUN, and Apple Computer.
 - Consulting partners include Arthur Andersen, Coopers and Lybrand, Ernst and Young, and Price Waterhouse.

Industry Markets

Sybase targets its marketing efforts to Fortune 1000 companies as well as government and defense agencies.

Although the SYBASE products are used by all industries, the principal industries served are: government and defense, banking and finance, telecommunications, and manufacturing.

Geographic Markets

Approximately 71% of Sybase's 1990 revenue came from North American sales, with the remaining 29% coming from international operations in the European, Asia/Pacific, and Latin American markets. A three-year summary of geographic source of revenue follows:

**SYBASE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1990		1989		1988	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
North America	\$73.2	71%	\$46.2	81%	\$20.7	86%
International	29.9	29%	11.1	19%	3.4	14%
TOTAL	\$103.1	100%	\$57.3	100%	\$24.1	100%

Sybase generates approximately 70% of its revenue through its direct sales force. The remaining 30% is derived from foreign distributorships, VARs, and systems integrators.

Sybase markets its products directly from its 29 North American sales offices and five international subsidiaries.

- Sybase's North American sales offices are in San Francisco, Sacramento, Seattle, Santa Clara, Los Angeles, Orange County, Santa Barbara, San Diego, Denver, Salt Lake City, Dallas, Houston, Phoenix, Minneapolis, Chicago, Cleveland, Cincinnati, St. Louis, Detroit, Boston, New York City, Albany, Rochester, New Jersey, Washington, D.C., Atlanta, Toronto, Vancouver, and Calgary.
- Sybase's international subsidiaries are located in the U.K., Australia, France, Germany, and Japan.
- Sybase has foreign distributorships in Belgium, Denmark, the Netherlands, Switzerland, Norway, Finland, Sweden, Spain, Portugal, Italy, Ireland, Austria, Taiwan, Singapore, Japan, Korea, Hong Kong, India, Israel, Mexico Venezuela, Chile, Columbia, and Argentina.

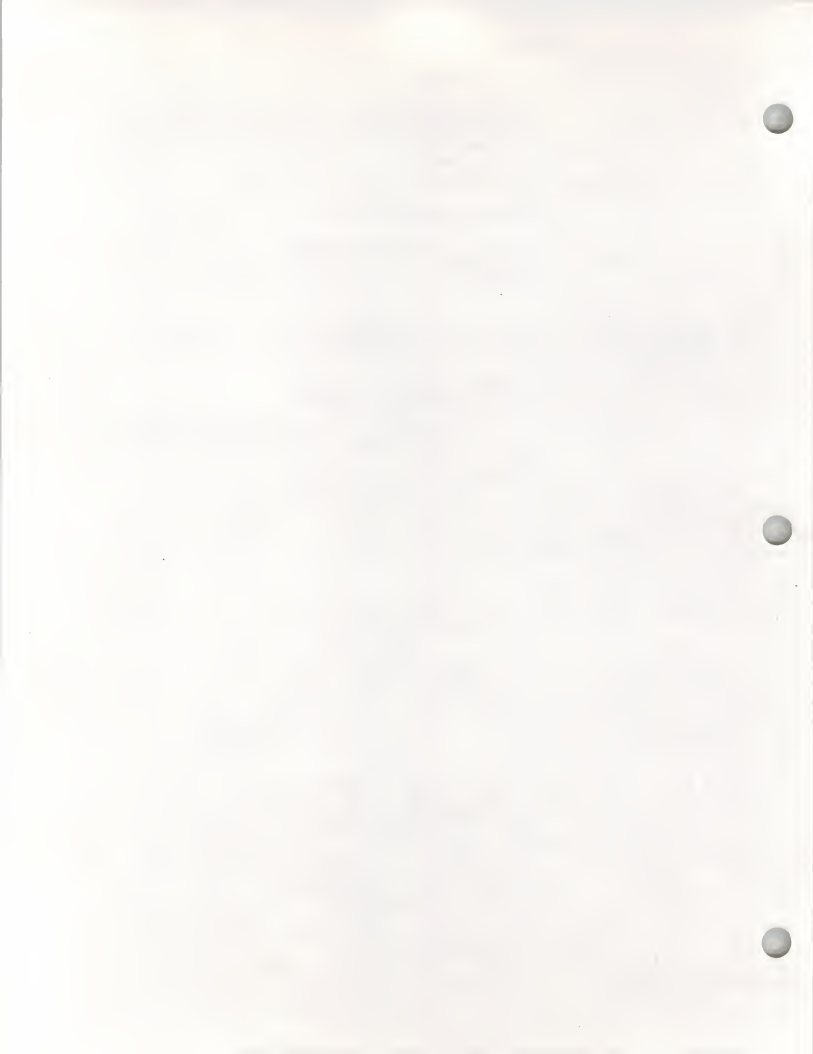
SQL Solutions has its headquarters in Burlington (MA), and has 16 North American sales and development offices, two DEFT software sales offices, and two international offices.

- SQL Solution's North American offices are located in Toronto, Montreal, Concord (NH), Richmond (IN), Bellbrook, (OH), Moretown (VT), New York, Bethesda (MD), Rockville (MD), Atlanta, Chicago, Emeryville (CA), Los Angeles, Newport Beach (CA), Denver, and Bainbridge Island (WA).
- DEFT sales offices are in Ontario and Los Angeles.
- SQL Solution's international offices are in the U.K. and the Netherlands.

**Computer
Hardware and
Software**

Sybase maintains the hardware and software for all supported platforms at its headquarters, as follows:

- DEC VAX processors under VMS
- The following UNIX platforms: DEC, HP, IBM, Pyramid, Sequent, Sun, AT&T, NCR, Data General, and NeXT
- Stratus, OS/2, DOS, and Macintosh



COMPANY PROFILE

SYBASE

6475 Christie Avenue
Emeryville, CA 94608
(415) 596-3500

Mark B. Hoffman, President and
CEO
Private Company
Total Employees: 275
Total Revenue, Fiscal Year End
12/31/88: \$24,000,000

The Company

Sybase, founded in November 1984, is the developer and marketer of the SYBASE[®] relational data base management system designed explicitly for on-line applications.

- Sybase was founded by a group of industry experts to address the shortcomings of real-time product offerings in the area of data base management for on-line transaction processing.
- Since its founding, Sybase has secured venture capital funding from the following companies: Apple Computer, Inc.; Ashton-Tate Corporation; Charles River Ventures; Hambrecht & Quist; Kleiner Perkins Caufield & Byers; Oak Investment Partners; T. Rowe Price; and TRW, Inc.

Sybase revenue for 1988 reached approximately \$24 million, a 300% increase over 1987 revenue of \$6 million. This increase in revenue is due solely to increased sales volume.

Sybase has OEM agreements with Pyramid Technology Corporation; Stratus Computer, Inc.; and NeXT, Inc. Sybase also has development agreements with Microsoft Corporation, Ashton-Tate, and TRW, Inc.

Sybase has established a strategic software partners program to provide customers with additional tools that can access SYBASE data. Current software partners include: Natural Language Incorporated, Network Innovations Corporation, DB/ACCESS Inc., Ashton-Tate, Borland International, Fortex, Inside Automation, National Information Systems, Unify, BIM, Gold Hill Computers, Neuron Data, DEFT, IDE, 20/20, SPSS, Verity, V.I. Corporation, and Information Builders, Inc.

As of December 31, 1988, Sybase had 275 employees, segmented approximately as follows:

Marketing and sales	110
Customer support	55
Research and development	69
Computer operations	14
General and administrative	<u>27</u>
	275

Sybase competitors fall into two areas as follows:

- Software vendors offering relational data base management systems. Primary competitors in this category are: Oracle Corporation and Relational Technology, Inc. (INGRES). Sybase feels it has an advantage over these software vendors because the competing systems are designed for decision support applications and do not address the specific needs of on-line transaction processing.
- Data base machine vendors offering relational data bases and specialized data base hardware as a package. Primary competitors in this category are TeraData and Britton Lee. Sybase feels it has an advantage over data base machine vendors because customers prefer to use processors that are not dedicated to one application.

Key Products and Services

Sybase designs, manufactures, and markets relational DBMS systems.

The SYBASE system is composed of the SYBASE SQL ServerTM and the SYBASE SQL ToolsetTM.

- The SYBASE SQL Server handles SQL query processing, transaction management, and the rules for a legal update. The SYBASE SQL Server is geared toward on-line transaction processing, as is evidenced by the following functional attributes:
 - High-volume processing is supported by the system by using precompiled procedures. By reducing the amount of memory needed per system user and for the operating system, more memory can be reserved for data caching, and I/O's can be reduced.
 - Data integrity is maintained by defining integrity rules and storing them in the data base rather than the applications. By doing this, no application can bypass the integrity rules, and integrity can be assured. The system also supports

referential integrity in that an update will cause an update or deletion in related records.

- High system availability is maintained by allowing system maintenance functions--such as data base backups, schema and integrity changes, performance tuning, and damage repairs--to be performed without taking the system off-line.
- Distributed data management is supported over a network of heterogeneous computers with multiple data bases while maintaining data integrity.
- The SYBASE SQL Toolset handles application development, application user interface, and operations and DB administration.
 - The SYBASE SQL Toolset is essentially a window-based user interface. The toolset also has three components for application development, as follows:
 - APT-Workbench™ is a complete 4GL application development environment consisting of an application generator, a screen painter, a 4GL, open interfaces to 3GLs, and a deployment module.
 - DB-LIBRARY™ is a programming language interface that allows custom programs and non-SYBASE products to communicate with the SYBASE SQL Server.
 - Data Workbench™ is a set of visually based tools for application development, data base maintenance, and decision support.
- The SYBASE system runs on DEC VAX processors under VMS, Sun workstations, and computers from Stratus Computer and Pyramid Technology. SYBASE will be available on HP 9000 Series computers and the NeXT Computer System in the second half of 1989.
- Pricing for the SYBASE system varies, based on the processor. Pricing for a VAX/VMS system ranges from \$21,000 on a MicroVAX, to over \$100,000 on a VAX 8800. Sun implementations range from \$1,000 for SYBASE SQL Toolset on a Sun workstation to more than \$40,000 for the full SYBASE system on a Sun minicomputer.

- There are currently over 350 sites using the SYBASE system, and Sybase expects that number to increase to approximately 1,000 sites by the end of 1989.

On March 7, 1989 Sybase announced the Secure SQL Server™, a multilevel secure relational data base management system. The system is designed to meet the National Computer Security Center's B1- and B2-level security for multilevel data.

- Both the B1 and B2 versions of the product will provide mandatory and discretionary access control, auditing of security-relevant events, and separate user and administrator roles.
- The Secure SQL Server B1 version will run on DEC VAX hardware under ULTRIX and will begin commercial shipments in the second half of 1989.
- The Secure SQL Server B2 version will run on bare hardware and will essentially have its own operating system built in. The B2 version will be available for shipment sometime in 1990.
- The Secure SQL Server is priced between \$20,000 and \$200,000—based on the size of the processor.
- The Secure SQL Server is currently in beta testing at customer locations.

Industry Markets

Sybase targets its marketing efforts to Fortune 1000 companies as well as government and defense agencies.

Although the SYBASE products are used by all industries, the principal industries served are: government and defense, banking and finance, telecommunications, and manufacturing.

Geographic Markets

Sybase's 1988 revenue was derived approximately as follows:

U.S.	80%
Canada	10%
Europe	<u>10%</u>
	100%

- Sybase did have revenue from other international sources, but the amount was not significant in 1988.

Sybase markets its products directly from its 16 North American sales offices and its five international offices.

- Sybase's North American sales offices are located in San Francisco; Los Angeles; Orange County; Denver; Dallas; Houston; Minneapolis; Chicago; Cleveland; Detroit; Boston; New York City; New Jersey; Washington, D.C.; Atlanta; and Toronto.
- Sybase's international operations are based in London with wholly owned subsidiaries in Canada, the U.K., Australia, France, and Germany.

Sybase has foreign distributorships in Belgium, Denmark, Holland, Switzerland, Norway, Finland, India, Israel, and Brazil.

Sybase generates approximately 80% of its revenue through its direct sales force. The remaining 20% is derived from foreign distributorships, VARs, and hardware OEMs.

Computer Hardware and Software

At its headquarters, Sybase maintains the following hardware and software for product support and development functions:

- DEC VAX, VMS (Sybase maintains all VAX systems that run VMS)
- Sun, UNIX (Sybase maintains all three architectures: 386, 68000, and SPARC)



SYMANTEC CORPORATION

10201 Torre Avenue
Cupertino, CA 95014
Phone: (408) 253-9600
Fax: (408) 252-4694

President & CEO:	Gordon E. Eubanks, Jr.
Status:	Public Company
Stock Exchange:	NASDAQ
Total Employees:	1,012 (3/93)
Total Revenue:	\$205,999,000
Fiscal Year End:	3/31/93

Key Points

- Symantec is the largest supplier of utility software for standalone and networked PCs.
- During fiscal 1993, revenues declined 6% and Symantec recorded \$12.1 million in nonrecurring charges associated with acquisitions, restructuring, and costly litigation with Borland International. During the year, Symantec implemented a companywide reorganization, reducing its workforce by 10% and streamlining management and operational procedures.
- During the first quarter of fiscal 1994, Symantec incurred additional nonrecurring charges of \$12.1 million associated with the acquisition of Contact Software International and restructuring charges for the relocation of Symantec's technical support and customer services operations.
- Through various acquisitions made during fiscal 1993, Symantec expanded its product line to include antiviral and security software and development tools.
- The company has also recently announced plans to acquire Fifth Generation Systems, a provider of various utility programs, in a stock swap valued at \$46 million.
- During fiscal 1993, Symantec announced major upgrades and new products, especially in the Windows area, that included Norton Desktop for Windows, Norton AntiVirus, Norton pcANYWHERE, and the Time Line family of project management software.

**Company
Description**

Symantec Corporation, founded in 1982, develops and publishes microcomputer applications and systems software products for the information management, productivity enhancement, software development, and utility needs for the business microcomputer market. The company's primary user base is composed of individuals in businesses and corporations.

Symantec entered the microcomputer software market in 1982 with a single product, Q&A, an integrated database management system and word processor. The company has expanded its product offerings to over 40 products. Acquisitions of software companies and licensing of third-party software products have provided the basis for much of this expansion.

Strategy

Symantec's product strategy has six key points:

- Market leadership in its product categories or market segments
- Diversified applications and systems software product line
- Multiplatform products within a network environment, including MS-DOS, Windows, OS/2, and Macintosh
- Graphical user interfaces
- Internal development supplemented by acquisitions and third-party products
- Decentralized development teams for each group of products with centralized marketing and support (technical and customer)

Financials

Symantec's total fiscal 1993 revenue was \$206 million, a 6% decrease from \$219.2 million in fiscal 1992. Net losses of \$11.5 million in fiscal 1993 include acquisition, restructuring, and other non-recurring expenses of \$12.1 million. A five-year financial summary follows:

**SYMANTEC CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	3/93	3/92	3/91	3/90	3/89
Revenue	\$206.0	\$219.2	\$135.0	\$83.9	\$61.3
· Percent increase (decrease) from previous year	(6%)	62%	61%	37%	N/A
Income (loss) before taxes	\$(17.2)	\$27.7	\$13.1	N/A	N/A
· Percent increase (decrease) from previous year	(162%)	111%	N/A	N/A	N/A
Net income (loss)	\$(11.5)	\$17.6	\$7.8	\$8.1	\$1.4
· Percent increase (decrease) from previous year	(165%)	126%	(4%)	548%	N/A
Earnings (loss) per share	\$(0.49)	\$0.71	\$0.34	\$0.38	\$0.08
· Percent increase (decrease) from previous year	(169%)	109%	(11%)	375%	N/A

(a) Includes pretax acquisition, restructuring, and other non-recurring expenses of \$12.1 million, \$6.8 million, and \$6.5 million in fiscal 1993, 1992, and 1991, respectively.

The decrease in fiscal 1993 revenue was due to reduced demand in the retail channel, the market's rapid transition from DOS to Windows products and fewer new, major product introductions early in 1993.

- Although Symantec had several important product introductions on the Windows platform, the marketplace shift to Windows occurred much faster than expected. Symantec's DOS products were necessarily affected by the corresponding slowing in the growth of that market.
- Due to a dramatic drop in hardware prices during 1992, funds earmarked for software were used for PC purchases.
- The market for antivirus software did not grow as expected.
- Due to softness in the European economy, revenue from international sales grew more slowly than anticipated.

Research and development costs were \$39.8 million (19% of total revenue) in fiscal 1993, \$33.2 million (15% of total revenue) in fiscal 1992, and \$19.3 million (14% of total revenue) in fiscal 1991.

Revenue for the three months ending June 30, 1993 reached \$59.1 million, compared to \$65.0 million for the same period in 1992. Net losses of \$12.1 million include one-time charges of \$7.4 million associated with the acquisition of Contact Software International and \$4.7 million associated with relocation expenses.

Market Financials

Symantec's products and services are used primarily by individuals in businesses and corporations.

Symantec derived approximately 80% of its fiscal 1993 revenue from systems software products (utilities and development tools) and 20% from applications software products (productivity and project management products). A three-year summary of source of revenue by product line follows:

**SYMANTEC CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)***

	FISCAL YEAR					
	3/93		3/92		3/91	
PRODUCT LINE	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Utilities	\$155	75%	\$147	67%	\$81	60%
Productivity tools	21	10%	44	20%	24	17%
Project management	21	10%	21	10%	24	17%
Development tools and other	9	5%	7	3%	8	6%
TOTAL	\$206	100%	\$219	100%	\$135	100%

*INPUT estimates

Geographic Markets

Approximately 65% of Symantec's fiscal 1993 revenue was derived from the U.S. and 35% from international sources. A three-year geographic source of revenue summary follows:

**SYMANTEC CORPORATION
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	3/93		3/92		3/91	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S..	\$133.5	65%	\$151.1	69%	\$95.6	71%
International	72.5	35%	68.1	31%	39.4	29%
TOTAL	\$206.0	100%	\$219.2	100%	\$135.0	100%

Operations/ Structure

Symantec's principal administrative, sales, and marketing facility, as well as certain research and development and support facilities, is located in Cupertino (CA).

Other corporate offices and development sites are in Bedford (MA); Brecksville (OH); Evanston (IL); Huntington (NY); Novato, San Diego, Santa Monica, and Sunnyvale (CA).

International subsidiaries are in Ireland, the Netherlands, U.K., Germany, France, Australia, Canada, and Italy.

Employees

As of March 31, 1993, Symantec had 1,012 employees, segmented as follows:

Sales and marketing	305
Product development	487
Management, manufacturing, administration, and finance	<u>220</u>
	1,012

Acquisitions

In June 1993, Symantec acquired Contact Software International, Inc. in exchange for approximately 2.7 million shares (\$40 million) of Symantec common stock. The acquisition will be accounted for as a pooling of interests.

- Contact, headquartered in Carrollton (TX) with 105 employees and annual revenue of about \$40 million, develops software products for building, managing, and maintaining contacts.

- Contact markets ACT!, a contact manager which is licensed by more than 600,000 users to keep calendar and personal data on DOS, Macintosh, and Windows platforms.

In November 1992, Symantec acquired Certus International Corporation for approximately 386,000 shares of Symantec common stock in a pooling of interests transaction.

- The acquisition provides Symantec with immediate entry into the PC systems security market and complements Symantec's efforts in virus protection product development.
- Certus products include NOVI, an antivirus product that prevents, detects, and repairs PC viruses; and Certus, a PC systems security product, and Certus LAN, for network-wide software standardization and version control that extends system fault tolerance to local workstations.

In September 1992, Symantec acquired Multiscope, Inc. for 253,000 shares of Symantec common stock and The Whitewater Group, Inc. for nearly 70,000 shares of Symantec common stock. These acquisitions added Windows-based GUI technology and object-oriented programming tools and libraries to Symantec's C++ development environment.

In April 1992, Symantec acquired Symantec (UK) Ltd., Symantec's U.K.-based sales subsidiary, for 603,000 shares of Symantec common stock.

In August 1991, Symantec acquired Zortech Inc., a Woburn (MA) developer of cross-platform C++ compilers for approximately 238,000 shares of Symantec common stock in a pooling of interests transaction. Zortech introduced the first native code C++ compiler in 1988, and marketed C++ compilers for DOS, Windows, OS/2, UNIX, and Macintosh platforms.

In August 1991, Symantec acquired Dynamic Microprocessor Associates Inc. (DMA), a privately-held firm based in Huntington (NY), for 400,000 shares of Symantec common stock. The acquisition was accounted for as a pooling-of-interests. DMA developed pcANYWHERE, an asynchronous communications system that supports PC-to-PC remote computing via a serial or modem connection.

In August 1990, Symantec expanded its business into utilities products with the acquisition of Peter Norton Computing, Inc., of Santa Monica (CA). The acquisition was valued at approximately \$70 million.

During 1987, Symantec completed three transactions which brought it the software and technologies behind some of its most successful products: TimeLine[®], MORE[™], GrandView[®], and the THINK[™] languages. The three acquisitions were:

- Breakthrough Software Corp., developer of Time Line project management software and Time Line Graphics packages
- Living Videotext, developer of products such as MORE, ThinkTank, and READY!
- THINK Technologies, a provider of languages such as THINK C[™] and THINK Pascal[™].

Key Products and Services

Symantec's current product offerings are summarized in the exhibits.

Symantec's products are currently organized into five product groups: Utilities, Development Tools, Productivity Applications, Project Management, and Contact Management.

- Currently, more than half of Symantec's net revenues are derived from products that operate on MS-DOS for IBM and compatible PCs. Other products run on Microsoft Windows, Apple Macintosh, and IBM OS/2 operating systems.
- Symantec is presently focusing much of its internal development efforts on products for Windows and Macintosh, and, to a lesser extent, OS/2, Microsoft Windows NT and UNIX.

Support Services

In early 1993, Symantec reorganized its support services operations and discontinued the operations of its Consulting Services Group.

Training services are now provided through Authorized Training Centers.

Symantec plans to implement a Consultants Program whereby third-party consultants will provide professional services to Symantec's software clients.

EXHIBIT A
SYMANTEC SYSTEMS SOFTWARE PRODUCTS
UTILITIES

PRODUCT	DESCRIPTION	FIRST SHIPPED	OPERATING ENVIRONMENT
Norton Utilities ^R	Tools for system-level operations such as disk and data recovery, security, performance optimization, and preventive maintenance	5/82	MS-DOS, Macintosh
Norton AntiVirus TM	Protects against, detects, and eliminates computer viruses under DOS	12/90	MS-DOS
NOVI	Programs to protect, detect, and eliminate computer viruses under MS-DOS and Macintosh	11/91	MS-DOS
Certus	Virus protection, plus management, security, and disaster recovery	4/87	MS-DOS
Symantec AntiVirus for Macintosh (SAM TM)	Protects against, detects, and eliminates computer viruses on the Macintosh	5/89	Macintosh
Norton Commander TM	DOS shell to provide character-based graphical approach and mouse capability for MS-DOS operations	7/86	MS-DOS
Norton Backup TM	Hard disk backup program	2/90	MS-DOS, Windows
Norton Editor ^R	Full screen editor for ASCII text files	6/85	MS-DOS
Norton Desktop TM for Windows	File management and utilities for Windows. Includes automated backup, data recovery, and network support.	7/91	Windows
Norton Desktop TM for DOS	File management and utilities for MS-DOS	6/92	MS-DOS
Norton pcANYWHERE TM	PC-to-PC remote computing and general communications	7/85	MS-DOS
Norton Essentials TM for PowerBook	PowerBook utilities	1/93	Macintosh
Norton Speedcache+ TM	Storage management for hard disk	3/93	MS-DOS

EXHIBIT B

SYMANTEC SYSTEMS SOFTWARE PRODUCTS
DEVELOPMENT TOOLS

PRODUCT	DESCRIPTION	FIRST SHIPPED	OPERATING ENVIRONMENT
THINK C™	Integrated C programming toolset, including a text editor, C compiler, linker, debugger, and project manager	4/86	Macintosh
THINK Pascal™	Toolset for Pascal programming, similar to THINK C (above)	8/86	Macintosh
THINK Reference™	On-line reference tool for Macintosh programmers	6/91	Macintosh
Zortech C++	Multi-platform development	9/88	Windows, MS-DOS OS/2
Actor ^R and Actor ^R Professional	Object-oriented programming systems for Windows development	2/87, 2/91	Windows
ObjectGraphics™	Object-oriented graphics library	7/90	Windows
ObjectGraphics™ C++	Object-oriented graphics class library for C++	2/92	Windows
MultiScope ^R Debuggers	Debugging tool	8/89	Windows, MS-DOS OS/2
Whitewater Resource Toolkit ^R	WYSIWYG editors	11/89	Windows

EXHIBIT C

SYMANTEC APPLICATIONS SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION	FIRST SHIPPED	OPERATING ENVIRONMENT
Productivity Applications			
Q&A™	Integrated database and word processing software	11/85	MS-DOS
Q&A Write™	Word processing module marketed separately	5/91	Windows
GrandView ^R	Planning, writing, and personal information management tool. Includes outline processing, word processing, and filing capabilities	4/88	MS-DOS
MORE™	Outlining, word processing, desktop presentations, and financial charting	7/86	Macintosh
Great Works™	Eight integrated applications: word processing, data base, spreadsheet, chart, draw, paint, outline, and communications.	6/91	Macintosh
Project Management			
Time Line ^R	Project organizing, scheduling, and resource allocation using the critical path method	9/84	Windows, MS-DOS
On Target™	Windows-based project planning using spreadsheets, outlines, calendars, and bar charts	4/91	Windows
Guide Line™ and Guide Line™ Maker	Front-end guides to Time Line and On Target	12/92	Windows, MS-DOS
Contact Management			
ACT!	Contact manager	9/87 6/92 8/92	MS-DOS Windows Macintosh
1st ACT!	Contact manager	10/91 11/92	MS-DOS Windows

**Marketing/
Sales**

Symantec markets its products domestically and in major foreign markets, primarily through independent software distributors and major retail chains.

Domestic Sales:

As of March 31, 1993, Symantec had approximately 96 people in its domestic direct field sales and telemarketing groups.

Symantec's sales strategy is to use a direct field sales force that works with businesses to encourage them to adopt Symantec's products as corporate standards.

- Symantec also has a distribution sales group to work with its major distributor and reseller accounts on the management of orders, inventory levels, and sell-through to retailers, as well as promotions and selling activities.
- A telemarketing sales group manages and supports major dealer and corporate end user accounts.

Symantec maintains distribution relationships with a number of major independent software distributors, including Ingram Micro D and Merisel. Symantec also maintains relationships with many of the major computer and software retailing organizations in the U.S., including Egghead Discount Software, Corporate Software, CompUSA, Software Spectrum, and PC Connection.

- Ingram Micro D represented 14%, 16%, and 14% of Symantec's net revenue in fiscal 1993, 1992, and 1991, respectively.
- Merisel represented 12%, 11%, and less than 10% of Symantec's net revenue in fiscal 1993, 1992, and 1991, respectively.
- Direct purchases by Egghead represented less than 10%, 10%, and 11% of Symantec's net revenue in fiscal 1993, 1992, and 1991, respectively.

International Sales:

As of March 31, 1993, Symantec had 127 sales, marketing, and related personnel in its international sales organization.

Most of Symantec's revenue from Canada come from sales by affiliates of Symantec's major U.S. distributors. In other countries, Symantec sells its products through authorized distributors that are restricted to specified territories.

Symantec has established sales offices in Holland, France, Australia, Italy, Canada, Germany, and the U.K.

There are currently over 40 translated versions of Symantec products including versions in Danish, Dutch, Finnish, French, German, Italian, Japanese, Norwegian, Russian, Spanish, and Swedish.

Alliances

Symantec has various technology partnerships with Apple Computer, including the following:

- An agreement to jointly develop Bedrock, a C++-based cross-platform application framework for Macintosh and Windows development to allow corporate developers and independent software vendors to build applications for both platforms without substantially rewriting code.
- An agreement to jointly produce a programming environment for Macintosh PowerPC systems.

Symantec's GrandView, Norton Speedcache+, Norton Commander, Norton Backup, and elements of certain other programs are licensed from third-party developers.

Clients

Symantec's customers include MIS/DP and department managers in organizations of varying type and size; among them Fortune 500 companies, small businesses, government agencies, and educational institutions.

Competitors

Symantec competes with at least one product from each of the major independent microcomputer software developers, including Aldus, Borland, Claris, Central Point Software, Computer Associates, Fifth Generation Systems, Lotus Development, Microsoft, and Software Publishing.

Specific Symantec products compete directly with products from other vendors, including Alpha Software, Microrim, Buttonware, Claris, Approach Software, and Ace Software.

The company also competes with microcomputer hardware manufacturers who develop their own software.

COMPANY PROFILE

SYMANTEC CORPORATION

10201 Torre Avenue
Cupertino, CA 95014
(408) 253-9600

Gordon E. Eubanks, Jr., President and CEO
Public Company, NASDAQ
Total Employees: 600 (5/91)
Total Revenue, Fiscal Year End
3/31/91: \$116,344,000

The Company

Symantec Corporation, founded in 1982, develops and publishes microcomputer application and systems software products for the information management, productivity, software development, and utility needs of business and professional users. The company's primary user base is composed of individuals in businesses and corporations.

Symantec's product strategy has six key points:

- Market leadership in its product categories or market segments
- Diversified applications and systems software product line
- Multiplatform products within a network environment, including MS-DOS, Windows, OS/2, and Macintosh
- Graphical user interfaces
- Internal development supplemented by acquisitions and third-party products
- Decentralized development/marketing/support teams for each group of products

Symantec entered the microcomputer software market in 1982 with a single product, Q&A, an integrated database management system and word processor. The company has expanded its product offerings to approximately 20 principal products. Acquisitions of software companies and licensing of third-party software products have provided the basis for much of this expansion. Summaries of recent Symantec acquisitions follow:

- In August 1991, Symantec acquired Dynamic Microprocessor Associates Inc. (DMA), a privately-held firm based in Huntington (NY), for 400,000 shares of Symantec common stock. The acquisition was accounted for as a pooling-of-interests.

- DMA developed pcANYWHERE, an asynchronous communications system that supports PC-to-PC remote computing via a serial or modem connection.
- At the time of the acquisition, DMA had 31 employees.
- In August 1991, Symantec acquired Zortech Inc., a Woburn (MA) developer of cross-platform C++ compilers for approximately 238,000 shares of Symantec common stock. The acquisition was accounted for as a pooling of interests.
 - Zortech introduced the first native code C++ compiler in 1988, and now markets C++ compilers for DOS, Windows, OS/2, UNIX, and Macintosh platforms.
 - At the time of the acquisition, Zortech had 32 employees. Zortech's revenue for fiscal 1991 was \$4.5 million.
 - Zortech's staff has joined Symantec's Language and Integrated Products Group in Bedford (MA).
- In August, 1990 Symantec acquired Peter Norton Computing, Inc., of Santa Monica (CA). The acquisition was valued at approximately \$70 million in stock and brought Symantec into the ranks of the 10 largest U.S. microcomputer software companies.
 - Norton is a leading developer of system management software, known for its "undelete" program and other tools to augment microcomputer operating environments. The company was privately held at the time of acquisition, with an installed base of 4 million users. Norton product development continues in Santa Monica.
 - Under the terms of the acquisition agreement, Peter Norton, founder and Chairman of the company became a member of the Board of Directors of Symantec.
- During 1987, Symantec completed three transactions which brought it the software and technologies behind some of its most successful products: TimeLine[®], MORE[™], GrandView[®], and the THINK[™] languages. The three acquisitions were:
 - Breakthrough Software Corp., developer of Time Line project management software and Time Line Graphics packages
 - Living Videotext, developer of products such as MORE, ThinkTank, and READY!

- THINK Technologies, a provider of languages such as THINK C™ and THINK Pascal™.

Symantec has received financial backing from venture capital firms, including Kleiner, Perkins, Caufield and Byers, the Masters Fund, Robertson Colman & Stephens, and Harvard Management.

Symantec's total fiscal 1991 revenue reached \$116.3 million, a 56% increase over fiscal 1990 revenues of \$50.0 million. Net income rose 4%, from \$9.0 million in fiscal 1990 to \$9.4 million in fiscal 1991. A four-year financial summary follows:

**SYMANTEC CORPORATION
FOUR-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR			
	3/91	3/90	3/89	3/88
Revenue	\$116.3	\$74.5	\$55.5	\$8.9
· Percent increase from previous year	56%	34%	524%	N/A
Income before taxes	\$13.1	\$10.3	\$5.8	\$0.8
· Percent increase from previous year	27%	78%	625%	N/A
Net income	\$9.4	\$9.0	\$4.9	\$0.4
· Percent increase from previous year	(a) 4%	84%	*	N/A
Earnings per share	\$0.93	\$0.97	\$0.16	\$0.01
· Percent increase (decrease) from previous year	(4%)	506%	*	N/A

* Percent change exceeds 1,000 percent.

- (a) Includes a pre-tax charge of \$6.5 million for costs incurred in connection with the merger with Peter Norton Computing, Inc.

Management attributed this revenue growth to significant expansion in international revenues, and the release of an enhanced version of The Norton Utilities in July 1990.

- Two other new products, The Norton Utilities® for the Macintosh, and The Norton AntiVirus™, plus an enhanced version of TimeLine, were also named as major contributors to 1991 revenue growth.

Charges associated with the Norton merger were noted as the primary negative impact on Symantec's 1991 operating results, reducing net income growth to 4% on net revenue growth of 56%.

- The one-time charge, totaling \$6.5 million, was principally for legal, accounting, and financial advisory services, and for expenses related to elimination of excess and duplicate facilities and personnel.

Symantec's research and development costs in fiscal 1991 were \$16.9 million, or approximately 14.5% of total revenue. Symantec reported an increase in R&D staff from 93 as of March 31, 1990, to 153 as of March 31, 1991.

- During the previous two years, R&D expenses as a percent of total revenue were at 12%, with costs of \$9.2 million in fiscal 1990, and \$6.7 million in fiscal 1989.
- In addition to funding internal research and development, Symantec spends a significant amount of its R&D dollars on payments to third-party developers working on new and enhanced products.

The company has not formed a large number of industry alliances and partnerships. Symantec has a three-year old sales and marketing agreement with Metier Management Systems (a division of Lockheed Corporation).

- The agreement links the two companies' project management products: Symantec's TimeLine™ PC-based system, and Metier's ARTEMIS product for mainframes, minicomputers, and high-end PCs.
- Metier is also an authorized reseller of TimeLine products.

As of May 31, 1991, Symantec had approximately 600 full-time employees (in more than 35 locations), segmented as follows:

Sales and Marketing	316
Product Development	158
Administration and Finance	<u>126</u>
	600

Symantec's competition comes in a number of different forms.

- The company competes with at least one product from each of the major independent microcomputer software developers, including Aldus, Ashton-Tate, Borland, Claris, Central Point

Software, Computer Associates, Fifth Generation Systems, Lotus Development, Microsoft, and Software Publishing.

- Symantec also competes with microcomputer hardware manufacturers who develop their own software.

Key Products and Services

Symantec derives close to 100% of its revenue from the sale microcomputer application and systems software. Less than 1% of revenue comes from services, although the company is expanding its consulting services offerings.

- Approximately 37% (\$43.1 million) of Symantec's fiscal 1991 revenue was derived from application software products (data management and project management), and the remaining 63% (\$73.3 million) was from systems software (language products, spreadsheet enhancements, and utilities).
- A three-year summary of source of revenue by Symantec product group follows. Revenue amounts have been estimated based on approximate revenue percentages for each product group, as provided by Symantec.

SYMANTEC CORPORATION THREE-YEAR SOURCE OF REVENUE SUMMARY *

(\$ millions)

ITEM	FISCAL YEAR					
	3/91		3/90		3/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE %	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Data management	\$23	20%	\$19	25%	18	33%
Project management	20	17%	15	20%	14	25%
Languages and spreadsheet enhancements	9	8%	6	8%	5	9%
Utilities	64	55%	35	47%	18	33%
TOTAL	\$116	100%	\$75	100%	\$55	100%

* INPUT estimates

Software Products:

Symantec has a decentralized product development strategy centered around teams called product groups. Each group works on products aimed at a particular market, and maintains its own technical support, marketing, research and development, and quality assurance staff.

- Currently there are four product groups: data management, project management, language products, and spreadsheet enhancements and utilities.
- More than half of Symantec software revenues come from MS-DOS-based products that run on IBM PCs and compatibles. Other products run on Apple Macintosh and IBM OS/2 platforms.
- Exhibits A, B, and C summarize Symantec's principal products in each of the four product groups.

Symantec continues to offer a mix of internally developed products and software licensed from third-party developers:

- Internal development efforts are now focused on graphical user interface (GUI) products running on Windows software and Macintosh computers, although development also continues on DOS platforms.
- Third-party products include all of Symantec's spreadsheet enhancement products, as well as GrandView, SAM, SUM, Norton Commander[®], Norton Backup[™], and elements of other products.

EXHIBIT A

SYMANTEC APPLICATION SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION	FIRST SHIPPED	OPERATING ENVIRONMENT
Data Management			
Q&A ^R	Integrated database and word processing software	11/85	MS-DOS, OS/2
Q&A Write	Word processing module marketed separately	7/87	MS-DOS,
Q&A Network Pack	Each Network Pack lets three additional users share one copy of Q&A on a LAN.	3/88	MS-DOS
DeskMate Q&A Write	Q&A Write for DeskMate's graphical environment. Includes mouse support, pull-down menus, and page previews.	3/88	DeskMate
JustWrite TM	Windows-based word processor	5/91	Windows
GrandView ^R	Planning, writing, and personal information management tool. Includes outline processing, word processing, and filing capabilities	4/88	MS-DOS
MORE TM	Outlining, word processing, desktop presentations, and financial charting	7/86	Macintosh
Great Works TM	Eight integrated applications: word processing, data base, spreadsheet, chart, draw, paint, outline, and communications.	6/91	Macintosh
Project Management			
Time Line ^R	Project organizing, scheduling, and resource allocation using the critical path method	9/84	MS-DOS
Time Line/LAN	LAN version of Time Line, consisting of two products: a File Server Version (one per LAN), and simultaneous LAN Packs.	11/88	MS-DOS
On Target TM	Windows-based project planning using spreadsheets, outlines, calendars, and bar charts	4/91	Windows

EXHIBIT B

SYMANTEC SYSTEMS SOFTWARE PRODUCTS
LANGUAGE PRODUCTS AND SPREADSHEET ENHANCEMENTS

PRODUCT	DESCRIPTION	FIRST SHIPPED	OPERATING ENVIRONMENT
THINK C™	Integrated C programming toolset, including a text editor, C compiler, linker, debugger, and project manager	4/86	Macintosh
THINK Pascal™	Toolset for Pascal programming, similar to THINK C (above)	8/86	Macintosh
Macintosh Pascal™	Entry level Pascal development environment for education	8/89	Macintosh
THINK Reference™	On-line reference tool for Macintosh programmers	6/91	Macintosh
Zortech C++	Multi-platform development	1988	MS-DOS, Windows, OS/2
SQZ!R	Data compression tool to reduce Lotus and Symphony spreadsheet file sizes	5/86	MS-DOS
Budget Express™	Allows manipulation of spreadsheets: summary views, consolidates dissimilar spreadsheets, creation of oversized spreadsheets	6/89	MS-DOS

EXHIBIT C

SYMANTEC SYSTEMS SOFTWARE PRODUCTS

UTILITIES

PRODUCT	DESCRIPTION	FIRST SHIPPED	OPERATING ENVIRONMENT
Norton Utilities ^R	Tools for system-level operations such as disk and data recovery, security, performance optimization, and preventive maintenance	5/82	MS-DOS, Macintosh
Norton Desktop ^R for Windows	File management and utilities for Windows. Includes automated backup, data recovery, and network support.	7/91	Windows
Norton AntiVirus TM	Protects against, detects, and eliminates computer viruses under DOS	12/90	MS-DOS
Norton Commander TM	DOS shell to provide character-based graphical approach and mouse capability for MS-DOS operations	7/86	MS-DOS
Norton Backup TM	Hard disk backup program	2/90	MS-DOS
Norton Backup for Windows ^R	Backup for Windows 3.0 Designed for single users with additional features for corporate-wide backups.	7/91	Windows
Norton Editor TM	Full screen editor for ASCII text files	6/85	MS-DOS
Symantec Utilities for Macintosh (SUM II TM)	Data recovery, disk management, backup, disk optimization, and Hex or ASCII file editing	6/88	Macintosh
Symantec AntiVirus for Macintosh (SAM TM)	Protects against, detects, and eliminates computer viruses on the Macintosh	5/89	Macintosh
Norton Utilities for System V ^R	Data recovery, disk management, backup, disk optimization, etc.	6/90	UNIX
pcANYWHERE	PC-to-PC remote computing and general communications	1985	MS-DOS
pcANYWHERE/LAN	Companion software to pcANYWHERE in a wide-area remote computing environment. Supports remote computing across, into, and out of a LAN	1985	MS-DOS

Professional Services

In 1991, Symantec launched a new Consulting Services Group that will work with the recently expanded Training Group to extend support services offered by the company. The group provides a variety of services for customers using Symantec software products, including the following:

- Customization of TimeLine schedules, Q&A databases, protection and recovery of data using Norton utilities, and integration of Symantec products with other software
- Needs analysis, system design, and software integration tailored to individual organizations' needs

Industry Markets

Symantec's customers include MIS/DP and department managers in organizations of varying type and size; among them Fortune 500 companies, small businesses, government agencies, and educational institutions.

Geographic Markets

Approximately 72% of Symantec's fiscal 1991 revenue was derived from the U.S. and 28% from international markets.

Symantec has experienced significant growth in international sales in the past three years, and attributes a major portion of its total revenue growth to sales in these markets.

A three-year geographic source of revenue summary follows:

**SYMANTEC CORPORATION
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

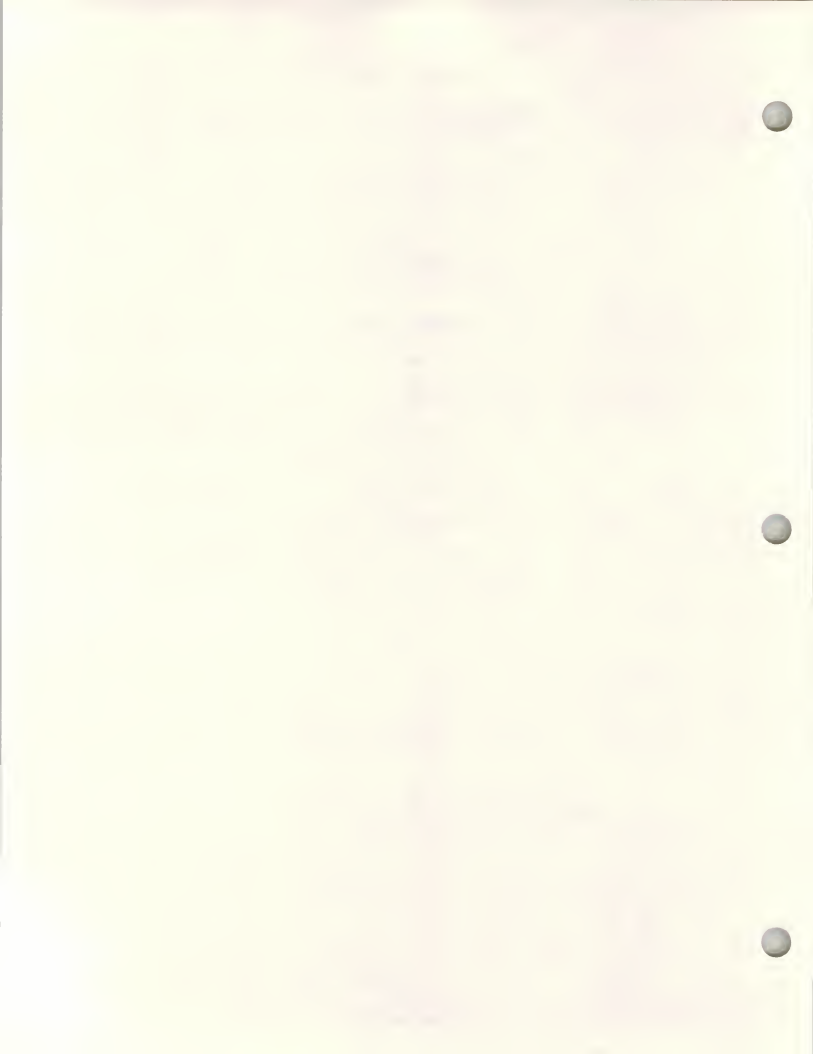
ITEM	FISCAL YEAR					
	3/91		3/90		3/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$84.2	72%	\$62.1	83%	\$49.6	89%
International	32.1	28%	12.4	17%	5.9	11%
TOTAL REVENUE	\$116.3	100%	\$74.5	100%	\$55.5	100%

Symantec sells its products in the U.S. through major distributors (including Ingram/Micro D, Kenfil and Merisel), major dealer chains and outlets (including Corporate Software, SoftMart, Software Spectrum, 800 Software, Tandy/Radio Shack, Egghead Software, and PC Connection), and its direct sales force, which sells to corporate and other large volume accounts through resellers. An independent sales effort supports distributors and resellers.

- Symantec's corporate headquarters are in Cupertino (CA), with sales and support offices located in over 29 cities throughout the United States.

Symantec markets its products internationally through a series of more than 75 exclusive distributor relationships. Each distributor is responsible for sales of Symantec products within its market area.

- There are currently over 40 translated versions of Symantec products including versions in Danish, Dutch, Finnish, French, German, Italian, Japanese, Norwegian, Russian, Spanish, and Swedish.
- Symantec hires employees to work with its foreign distributors. As of May 31, 1991, Symantec had 53 employees in its international sales organization.
- Symantec's international sales offices are in Australia (2), Brazil, Canada (3), France, Germany, Holland, Italy, and the U.K.



COMPANY PROFILE

SYMANTEC CORPORATION

10201 Torre Avenue
Cupertino, CA 95014
(408) 253-9600

Gordon E. Eubanks, Jr., President and CEO
Private Company
Total Employees: 214
Total Revenue, Fiscal Year End
12/31/87: \$18,000,000 *

*INPUT estimate

The Company

Symantec Corporation, founded in 1982, develops and publishes microcomputer productivity software.

- In September 1984, Symantec merged with C&E Software, a development organization with experience in the microcomputer industry, and software development tools written in assembly language.
- In June 1985, Symantec formed the Turner Hall Publishing Division, which became an autonomous division of Symantec, publishing utility software products for cross-industry markets.
- In January 1987, Symantec announced the merger with Breakthrough Software Corp., the developer of Time Line project management software and Time Line Graphics packages. This area is run as a product team of Symantec.
- In July 1987, Living Videotext merged with Symantec. The Outlining and Presentations team provides products such as MORE[®], ThinkTank[™], and READY![™] and is run as a product team of Symantec.
- In September 1987, Symantec announced the merger with THINK Technologies, a provider of languages such as THINK's LightspeedC. This area is run as a product team of Symantec.

Symantec has received financial backing from venture capital firms, including Kleiner, Perkins, Caufield and Byers, the Masters Fund, Robertson Colman & Stephens, and Harvard Management.

INPUT estimates that Symantec's total 1987 revenue reached \$18 million, a 38% increase over 1986 revenue.

In April 1988, Symantec and Metier Management Systems (a division of Lockheed Corporation) announced a joint sales and marketing agreement which links their project management products.

- The agreement calls for a link between Symantec's Time Line™ PC project management product and Metier's ARTEMIS product for mainframes, minicomputers, and high-end PCs. Also included in the agreement are plans to link future Symantec and Metier product management products.
- Metier is also authorized to act as a reseller for Symantec's Time Line products

In October 1988, Symantec and TOPS (a division of Sun Microsystems) announced the acquisition by TOPS of Symantec's InBox™ electronic mail package for Macintosh and IBM microcomputer local-area networks.

- TOPS acquired all of the marketing and development rights to the InBox™ product and the InBox™ developers and support team will join Sun's TOPS division.

Symantec is organized into six product teams, each with its own development, product marketing, technical support, quality assurance, and documentation departments. The finance, sales, and operations departments are centralized for the company. These product teams are as follows:

- The Languages team, headquartered in Bedford (MA), provides development and language tools for the Apple Macintosh.
- The Outlining and Presentations team, headquartered in Cupertino (CA), provides management presentation tools for IBM microcomputers, compatibles, and the Macintosh.
- The Project Management (Time Line) team, headquartered in Novato (CA), provides project management and graphics software for IBM and compatible microcomputers.
- The Turner Hall Publishing team, located in Cupertino, provides add-on utilities software for enhanced productivity in the use of spreadsheets.
- The File Management and Word Processing team (Q&A) in Cupertino provides software for IBM and compatible microcomputers.

- The Graphical User Interface team, also located in Cupertino, provides Symantec Utilities for Macintosh (SUM).

Symantec has a total of 214 employees in 11 locations.

Key Products and Services

Symantec derives all of its revenue from the delivery of development and application software for IBM and Apple Macintosh microcomputers. These products, by product team, are as follows:

The Turner Hall Publishing team produces add-on utilities for Lotus 1-2-3 and Symphony spreadsheet users and for Macintosh and Microsoft Excel users.

- 4WORD The Add-In Word Processor™ for 1-2-3 provides features for word wrapping, on-screen justification, block copy and move. The retail price is \$99.95.
- The Cambridge Spreadsheet Analyst™ analyzes Lotus and Symphony spreadsheets for potential errors.
 - The Spreadsheet Comparator function compares two files and shows the differences between the two.
 - A macro analyzer graphically maps the operation and interaction of all macros.
 - Cambridge Spreadsheet Analyst retails for \$99.95.
- 4VIEWS™ is an add-on analysis tool and report writer for 1-2-3 data bases. Individual features include:
 - Form View provides simplified data entry.
 - Table View supplies expanded data base column and row display.
 - CrossTab View simplifies understanding of data base relationships.
 - Report View provides additional capabilities for mailing labels and detailed reports.
 - 4VIEWS has a retail price of \$99.95.
- Spellin!™ is an on-demand spelling checker for 1-2-3 and Symphony using Lotus Add-In and Borland Advanced Spelling

technologies. Spellin! requires 1-2-3 Release 2 or Symphony and retails for \$79.95.

- Note-It[®] Plus allows for the creation of 1-2-3 reminder notes that are attached to specific cells or labels. These notes can be used to document the spreadsheet or as explanations for processes. Note-It Plus requires 1-2-3 Release 2 and retails for \$79.95.
- SQZ![®] Plus is a spreadsheet file utility that reduces on-disk files. The utility also adds functions for a spreadsheet history and a keystroke recorder. SQZ! Plus requires 1-2-3 Release 2 or Symphony and retails for \$99.95.
- MacSQZ![®] provides the same functions as SQZ! Plus for the Macintosh. MacSQZ! requires Microsoft Excel and retails for \$79.95.

Symantec considers the Project Management (Time Line) team to be the leader in the area of project management software for IBM and compatible microcomputers.

- Time Line[™] is a project management tool that incorporates resource leveling, lead/lag scheduling, and PERT, Gantt, and actual-vs-planned charts.
 - Time Line is a form-driven product and works with many industry-standard formats.
 - Time Line 2.0 requires 384K of memory and retails for \$495.
 - Time Line 3.0 requires 640K of memory or a hard disk and retails for \$595.
- Time Line Graphics extends the capabilities of Time Line 2.0 by producing charts and graphs from project management schedules. The suggested retail price is \$195.
- Symantec's Customer Assistance that's Responsive and Effective (C.A.R.E.) program assists users with technical support, bulletin board access, and quarterly newsletters.

The Outlining and Presentations team produces outline processing organizational software for IBM microcomputers, compatibles, and the Macintosh.

- MORE[®] provides an outline planning and desktop presentation system to organize and produce presentations.

- The outline processing portion provides utilities to organize thoughts, focus writing, and manage projects and priorities.
- The desktop presentation system provides capabilities for producing presentations of text, graphics, bullet and organization-style charts.
- MORE is available for the Macintosh with color support for a retail price of \$295.
- READY!™ is a RAM resident outline processor program to be used in conjunction with other applications on IBM and compatible microcomputers.
 - READY! provides capabilities to manage "to do" lists, take notes for later use, refer to lists of often-used information, and manage time.
 - READY! is compatible with Lotus 1-2-3, Q&A, Q&A Write, and Time Line and retails for \$99.95.
- ThinkTank™ is an outline processor management tool for IBM and Macintosh microcomputers that provides assistance in organizing and writing documents and plans. ThinkTank includes templates for Sales and Marketing, Customer Service, Business Management, Personal Details, Legal, and General Information. The product retails for \$195.
- GrandView is a personal information management tool for desktop planning, writing, and information management. Version 1.0 was shipped in April 1988.

The Languages team produces language and development tools for Macintosh microcomputers.

- THINK's Lightspeed Pascal™ is a Pascal programming environment for the Macintosh providing a text editor, compiler, linker, Project Manager, and intelligent debugger. THINK's Lightspeed Pascal retails for \$125.
- THINK's LightspeedC™ is a C language programming environment for the Macintosh that combines a multiwindow text editor, compiler, linker, and auto-make facility. The product retails for \$175.
- CAPPS™ (Capps Prime) Editor Construction Kits are add-on products for THINK's LightspeedC and THINK's Lightspeed Pascal to provide programmers with additional tools for adding

line-oriented and text editing capabilities. CAPPS' has a retail price of \$75.

- HFS Navigator is a document management system for the Macintosh that facilitates accessing, renaming, and deleting files. HFS Navigator for the Macintosh system retails for \$59.95.
- LaserSpeed is a print spooler facility for the Macintosh to allow print files to go into a print queue while continuing to edit documents.
 - Additional features allow the spooling and printing of PostScript Pagemaker and JustText files, and document prioritization of spool files.
 - LaserSpeed retails for \$99.
- Just Enough Pascal is an add-on learning tool for THINK's Lightspeed Pascal to be run on the Macintosh. Just Enough Pascal is due to be released in the fourth quarter of 1988.

The File Management and Word Processing team provides software for the IBM microcomputer and compatibles.

- Q&A™ is a data management and word processing software product for IBM and compatible microcomputers that integrates natural language processing technology, allowing users to manipulate data using English sentences.
 - Q&A™ provides integration to Lotus 1-2-3, dBASE, and other standards.
 - Q&A™ Version 3.0 is priced at \$349.
- Q&A Write provides a professional word processor with built-in font and laser printer support.
 - The card file facilitates customized mailings.
 - Additional features include column/row math, a spelling checker, and multicolumn printing capability.
- The Graphical User Interface team provides Symantec Utilities for Macintosh (SUM).
 - Utilities include hard disk management, encryption and password protection, and data and file recovery.

- SUM requires a Macintosh 512Ke, Plus, SE, or II and System File 4.0 and Finder 5.0 or later.
- SUM retails for \$99.95.

Industry Markets

Symantec feels its target market consists of first-time computer users as well as more experienced users who want the benefit of intelligence in software, such as managers, corporate staffers, administrative assistants, LOTUS 1-2-3 users, and small businesses.

Geographic Markets

Approximately 83% of Symantec's 1987 revenue was derived from the U.S. and 17% from other non-U.S. sources.

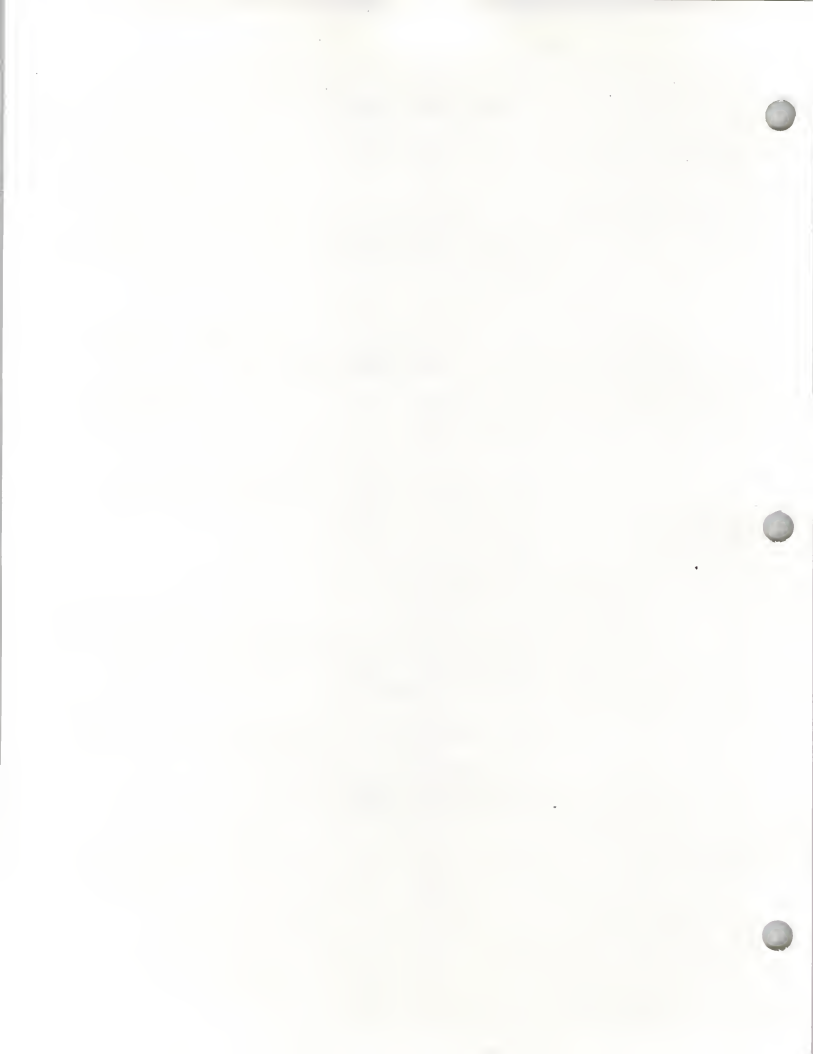
Non-U.S. revenue is generated from English, French, Dutch, and German speaking countries in Europe, Australia, Canada, and Latin America.

Symantec's divisional and development facilities are located in Cupertino, Novato, and Mountain View (CA); Fairfield (IA); and Bedford (MA).

Sales and support offices are located in New York, Houston, Dallas, Chicago, Los Angeles, St. Louis, Atlanta, Bedford, Orange County, and Cupertino.

Symantec distributes its products through major distributors (including Softsel, Micro D, and Ingram), major dealer chains and outlets, and a direct sales force that sells to corporate and large volume accounts through resellers. An independent sales effort supports distributors and resellers.

Symantec markets its products internationally through a series of exclusive "partner" relationships to over 25 countries and has over 20 translated versions of its products. Each "partner" is responsible for sales, marketing, and technical support of the products that it sells on behalf of Symantec.



COMPANY BRIEF

Cross Industry: Systems Software

Symantec Corporation

10201 Torre Avenue
Cupertino, CA 95014
(408) 253-9600

CEO: Gordon Eubanks, President
Private Company
Founded: 1982

Employees: 50 (12/86)
Revenue (FYE 12/31/85): \$1,400,000

The Company: Symantec produces microcomputer software products utilizing natural language processors

Sources of Revenue:

- Systems Software (100%)

Key Products:

- Systems Software (Utilizes IBM PC or compatibles and requires 512K RAM memory)
 - Q&A Version 1.1 is a data management and word processing software product which integrates natural language processing technology, allowing users to manipulate data using English sentences
 - Q&A Version 1.1 is priced at \$349. As of December 1986 over 32,000 copies had been sold and the software had been translated into German, French, and Dutch
 - Q&A Version 2.0 is a new product (introduced 11/86) which enables users to run Lotus 1-2-3 directly from the Q&A main menu. Q&A Version 2.0 is priced at \$349.

Target Industries:

- Cross Industry (100%)
- Symantec feels its target market consists of first-time computer users as well as more experienced users who want the benefit of intelligence in software, such as managers, corporate staffers, administrative assistants, Lotus 1-2-3 users, and small businesses

Geographic Markets:

- U.S. (98%)
- Non-U.S. (2%)
- Non-U.S. revenue is generated in English, French, Dutch, and German speaking countries in Europe, Australia, Canada, and Latin America
- Symantec distributes its products through over 3,000 retailers in the U.S.

December 1986

Significant Events:

- Symantec Corporation's first product Q&A was shipped in November 1985
- In September 1984, Symantec merged with C&E Software

December 1986

SYMIX COMPUTER SYSTEMS, INC.

2800 Corporate Exchange Drive
Columbus, OH 43231
Phone: (614) 523-7000
Fax: (614) 895-2504

Chairman, President, & CEO:	Lawrence J. Fox
Status:	Public Corporation
Stock Exchange:	NASDAQ
Total Employees:	270 (4/93)
Total Revenue:	\$26,686,000
Fiscal Year End:	6/30/92

Key Points

- In addition to its original customer base of make-to-order manufacturers, Symix Computer Systems' SYMIX product line is increasingly being sold to make-to-stock and repetitive manufacturers as well as the combination make-to-order/make-to-stock and make-to-order/repetitive manufacturing environments.
- SYMIX offers the latest technology with open systems, client/server architecture, and a graphical user interface.
- During fiscal 1992, Symix Computer Systems added systems integration and consulting services to the range of support services it provides to its software and turnkey system clients.
- Beginning in July 1992, Symix Computer Systems bundled its SYMIX modules, whereby customers license all system modules (currently 13 modules) and pay a license fee for each concurrent session or active terminal on the system. Symix management believes this method of packaging and pricing is more attractive to customers compared to traditional machine-class pricing because there is a more direct relationship between value (number of users) and price.
- Also during fiscal 1992, Symix began expanding its direct sales and support organization to selected international markets, opening full-service offices in Canada, the U.K., and Southeast Asia.

**Company
Description**

Symix Computer Systems develops, markets, and supports SYMIX, a fully integrated manufacturing control, accounting, and financial management UNIX-based turnkey system for "make-to-order", "make-to-stock", and "repetitive" discrete manufacturers.

The company is a value-added reseller for Hewlett-Packard and a Cooperative Software Partner (CSP) for IBM.

Symix Computer Systems currently has more than 1,500 manufacturing installations worldwide.

Company History

Symix Computer Systems was founded in 1979 to develop and market MCS, a manufacturing control software product for microcomputers.

In 1986, the company introduced the SYMIX system and in 1988 began offering the product as a turnkey system.

In March 1991, Symix Computer Systems made an initial public offering of one million shares of its common stock, of which approximately half were sold by the company and half by selling shareholders. Estimated net proceeds to the company were approximately \$7.4 million.

Effective January 1, 1990, Symix Computer Systems changed its fiscal year end from December 31 to June 30.

Financials

Symix Computer Systems' fiscal 1992 revenue reached \$26.7 million, a 35% increase over fiscal 1991 revenue of \$19.8 million. Net income declined from \$1.8 million in fiscal 1991 to \$1.3 million in fiscal 1992. A three-year financial summary follows:

**SYMIX COMPUTER SYSTEMS, INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR		
	6/92	6/91	6/90
Revenue	\$26,686	\$19,759	\$9,965
• Percent increase from previous year	35%	98%	81%
Income before taxes	\$2,193	\$2,792	\$1,132
• Percent increase (decrease) from previous year	(21%)	147%	N/A
• Gross margin	8%	14%	11%
Net income	\$1,337	\$1,757	\$692
• Percent increase (decrease) from previous year	(24%)	154%	N/A
• Net margin	5%	9%	7%
Earnings per share	\$0.46	\$0.73	\$0.32
• Percent increase (decrease) from previous year	(37%)	128%	N/A

A three-year summary of source of revenue by product line follows:

**SYMIX SYSTEMS, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR					
	6/92		6/91		6/90	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software	\$18,317	68%	\$11,711	59%	\$7,091	71%
Hardware	3,384	13%	5,144	26%	1,447	15%
Services	4,985	19%	2,904	15%	1,427	14%
TOTAL	\$26,686	100%	\$19,759	100%	\$9,965	100%

Symix management attributes fiscal 1992 results to the following:

- The lower growth rate in fiscal 1992 was due to slower growth in the domestic economy in 1992, particularly in the manufacturing segment of the economy that represents Symix's customer base.
- License fees and related software revenues increased 56% in fiscal 1992 due principally to the expansion of the direct sales organization and continued customer acceptance of the SYMIX product line.
- A 34% reduction in hardware revenues resulted from an increased competitive environment for UNIX-based hardware platforms, less emphasis by Symix in selling hardware due the lower margins compared to software and services, and an increase in joint marketing activities with other UNIX hardware manufacturers for which Symix does not directly sell their hardware.
- Service revenue, which increased 72% during fiscal 1992, includes installation, implementation, training, consulting, systems integration, and software product support and maintenance subscription services.

For the six months ending December 31, 1992, revenue reached \$15.6 million, a 23% increase over \$12.7 million. Net income was \$796,232 compared to \$852,582 for the same period a year ago. Results were lower than expected and were the direct result of lower than anticipated sales, particularly in the domestic market.

Employees

As of June 30, 1992, Symix Computer Systems had about 250 employees. as of March 31, 1993, the company had 270 employees, segmented as follows:

Marketing, sales, and support services	111
Professional services and custom programming	78
Product development and production engineering	46
Administration and finance	<u>35</u>
	270

Key Products and Services

The SYMIX Solution is the company's integrated manufacturing control, accounting, and financial management system.

- The software is written in the PROGRESS integrated application environment, which consists of the PROGRESS fourth generation language and the PROGRESS relational data base management system.
- The SYMIX Solution is highly portable and operates across a range of operating systems (including UNIX, DOS, and VMS) and supports LAN and open system environments as well as client/server architectures and distributed data bases.
- Symix Computer Systems is a CSP for IBM's RISC System/6000 and a Premier Solution Provider for the HP 9000 Series.

The SYMIX Solution is a fully integrated manufacturing control and financial management software solution that offers manufacturers control of their entire business—from business planning and operations management to manufacturing control and financial analysis. The SYMIX Solution's functionality includes the following:

- Order Management:
 - Automatic credit checking
 - Blanket orders
 - Options order entry (product configurator)
 - Volume, contract, and special pricing
 - Time-phased allocations
 - Job cost estimating and quotation
 - Progressive billing
 - Serial number tracking
 - Commissions
- Material Management:
 - Standard routings
 - Bills-of-material
 - Cost methods, including standard and actual
 - Multiple warehouses and stockrooms
 - Unit-of-measure conversion
 - Physical inventory
 - Cycle counting
 - Engineering change notice control
 - Master production scheduling
 - Unlimited planning horizon
 - Net-change or regenerative MRP
 - Bucketless
 - On-line access to MRP outputs
 - Firm planned orders
 - Just-in-time principles

- Production Management:
 - Infinite, finite, forward, and backward scheduling
 - What-if scheduling
 - Capacity requirements planning
 - Overlapping operations
 - Work center dispatching
 - Job tracking and costing
 - Subcontracting capability
 - Labor efficiency
 - Payroll interface
 - Rough-cut capacity planning
- Financial Management:
 - General ledger
 - Accounts payable
 - Accounts receivable
 - Fixed assets
 - Multicurrency
 - Multidivision
 - Multicountry taxation requirement
- Additional Capabilities:
 - Purchasing
 - Payroll
 - Lot control
 - Backflushing
 - Human resources
 - Data collection
 - EDI interface
 - CAD interface
 - Systems integration
 - Multi-language

Beginning in July 1992, Symix Computer Systems changed its method of packaging and pricing its software applications. Under the new method, Symix licenses to the customer one complete package (currently 13 modules) and the customer pays a license fee for each concurrent session or active terminal on the system. Under this approach, Symix receives additional license fee revenue whenever a customer increases the number of concurrent sessions or active terminals.

Maintenance and support services are contracted for and billed separately from software, hardware, and other services provided by the

company. Maintenance and support programs are generally billed for six month periods.

- Other services provided by Symix Computer Systems include installation, consulting and implementation assistance, training, custom programming, and systems integration.
- Hardware maintenance is provided by the hardware vendor.

Industry Markets

One hundred percent of Symix Computer Systems' revenue is derived from the discrete manufacturing industry.

Symix Computer Systems markets its products and services principally to discrete manufacturing facilities with 50 to 500 employees, including facilities of large industrial corporations as well as independent manufacturers.

The company has customers in automotive supply, electronics, aircraft maintenance, metal fabrication, machinery, and industrial equipment.

Symix Computer Systems markets its products primarily through a direct sales force. Independent distributors continue to sell certain Symix products to smaller manufacturing facilities and provide leads to potential customers.

Geographic Markets

Approximately 92% of Symix Computer Systems' fiscal 1992 revenue was derived from the U.S. and 8% from international sources.

The company markets its products in the U.S. through a direct sales force and currently maintains 24 sales offices throughout the U.S., including 6 full-service district offices and 18 satellite sales offices.

U.S. district offices and sales offices are as follows:

- Central District Office: Columbus (OH), with sales offices in Indianapolis (IN), Grand Rapids (MI), and Grosse Pointe Farms (MI)
- North Central District Office: Westmont (IL), with sales offices in Fairfield (IA), Muskegon (WI), and Minneapolis (MN)
- South Central District Office: Dallas (TX), with sales offices in Houston (TX) and Kansas City (MO)

- Northeast District Office: Plymouth Meeting (PA), with sales offices in North Andover (MA), Amherst (NY), Brick (NJ), and Annapolis (MD)
- Southeast District Office: Charlotte (NC), with sales offices in Atlanta (GA), Duluth (GA), Raleigh (NC), Pompano Beach (FL), and Birmingham (AL)
- Western District Office: Newport Beach (CA), with a sales office in Campbell (CA)

Symix Computer Systems' strategy for international sales and marketing involves leveraging its direct sales and service organization with independent third-party distributors.

- Symix Computer Systems has full service offices in Thailand, Ontario (Canada) and the U.K.
- The company also has more than 70 distributors located throughout North and South America, Europe, Asia, and Australia.

COMPANY PROFILE

SYMIX SYSTEMS, INC.

2400 Corporate Exchange Drive
Suite 200
Columbus, OH 43231
(614) 895-0738

Lawrence J. Fox, Chairman and President
Public Corporation, NASDAQ
Total Employees: 143 (12/90)
Total Revenue, Fiscal Year End
12/31/90: \$15,098,000

The Company

Symix Systems, Inc. develops, markets, and supports Symix, a fully integrated manufacturing control, accounting, and financial management UNIX-based turnkey system for "make-to-order" discrete manufacturers. The company is a value-added reseller for IBM and Hewlett-Packard.

- Symix Systems was founded in 1979 to develop and market MCS, a manufacturing control software product for microcomputers.
- In 1986, the company introduced the Symix system and in 1988 began offering the product as a turnkey system.
- Symix Systems currently has an installed base of over 1,000 licensed manufacturing facilities representing over 900 customers.

In March 1991, Symix Systems made an initial public offering of one million shares of its common stock, of which approximately half were sold by the company and half by selling shareholders. Estimated net proceeds to the company of approximately \$7.4 million will be used to reduce bank debt and for general corporate purposes.

Effective January 1, 1990, Symix Systems changed its fiscal year end from December 31 to June 30. In the five-year summary that follows, financials have been presented on a calendar-year basis for comparison purposes:

**SYMIX SYSTEMS, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	1990	1989	1988	1987	1986
Revenue	\$15,098	\$7,397	\$4,490	\$2,332	\$1,592
• Percent increase from previous year	104%	65%	93%	46%	N/A
Income before taxes	\$2,110	\$758	\$483	\$296	\$157
• Percent increase from previous year	178%	57%	63%	89%	N/A
• Gross margin	14%	10%	7%	13%	10%
Net income	\$1,302	\$455	\$308	\$183	\$146
• Percent increase from previous year	186%	48%	68%	25%	N/A
• Net margin	9%	6%	7%	8%	9%
Earnings per share	\$0.59	\$0.21	\$0.17	\$0.11	\$0.09
• Percent increase from previous year	181%	24%	55%	22%	N/A

Revenue for the nine months ending March 31, 1991 reached \$14.2 million, a 106% increase over \$6.9 million for the same period in 1990. Net income for the period rose from \$450,000 to over \$1.3 million.

As of December 31, 1990, Symix Systems had 143 employees, segmented as follows:

Marketing, sales, and support services	75
Consulting and implementation services	14
Production and engineering	16
Product development and custom engineering	25
Management, administration, and finance	<u>13</u>
	143

Key Products and Services

Approximately 30% (\$4.5 million) of 1990 revenue was derived from IBM-based turnkey systems and 22% (\$.3 million) from HP-based turnkey systems. The remainder of revenue was derived from software-only sales and support services.

A three-year summary of source of revenue, as provided by Symix Systems, follows:

**SYMIX SYSTEMS, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ thousands)**

ITEM	FISCAL YEAR					
	1990		1989		1988	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software	\$9,595	64%	\$5,642	76%	\$3,765	84%
Hardware	(a) 3,373	22%	797	11%	198	4%
Services	(b) 2,130	14%	958	13%	527	12%
TOTAL	\$15,098	100%	\$7,397	100%	\$4,490	100%

(a) Includes \$3 million in software sales for IBM turnkey systems and \$1.8 million in software sales for HP turnkey systems.

(b) Includes \$1.5 million in IBM hardware sales and \$1.5 million in HP hardware sales as part of turnkey systems.

Symix is the company's integrated manufacturing control, accounting, and financial management system.

- The software is written in the PROGRESS fourth-generation relational data base language.
- Symix runs on over 300 hardware platforms using the UNIX operating system, including various platforms offered by IBM, HP, DEC, NCR, Sun, and Sequent.
- Symix is also compatible with other operating systems, including VMS and DOS, and with local-area networks, such as Novell and Ethernet.
- Symix Systems is an Industry Remarketer for IBM's RISC System/6000 and a Premier Solution Provider for the HP 9000 Series.

Symix consists of the following 15 software modules that may be purchased separately or as an integrated system:

- Manufacturing:
 - Inventory Control
 - Inventory Control Data Collection
 - Customer Order Entry
 - Product Configurator
 - Purchasing
 - Shop Floor Control
 - Shop Floor Data Collection
 - Time and Attendance Data Collection
 - Advance Manufacturing/MRP
 - Engineering Change Notice
- Accounting and Financial Management:
 - Accounts Payable
 - Accounts Receivable
 - General Ledger
 - Payroll
 - Fixed Assets

The aggregate price of the 15 currently available modules from direct sales representatives ranges from \$19,000 to \$550,000, depending on the size of the computer.

- An average customer buys eight modules.
- The initial license fee for direct sales of software averaged \$90,000, \$36,000, and \$30,000 for 1990, 1989, and 1988, respectively.

Maintenance and support services are contracted for and billed separately from software, hardware, and other services provided by the company.

- Maintenance and support programs are generally billed for six month periods.
- The price for maintenance is 8% (annual) of the current list price of modules covered, and the price for support is 4% (annual) of the current list price of the current modules covered.

Customer support services provided by Symix Systems include installation, consulting and implementation assistance, classroom training, and telephone support. Hardware maintenance is provided by the hardware vendor.

Industry Markets

One hundred percent of Symix Systems' revenue is derived from the discrete manufacturing industry.

Symix Systems markets its products and services principally to discrete manufacturing facilities with 50 to 500 employees, including facilities of large industrial corporations as well as independent manufacturers.

The company has customers in automotive supply, electronics, and fabricating metals industries. Smaller clients include DOD Electronics, Memtron Technologies, and The Bradbury Company. Large-company clients include General Electric, Kodak, TRW, and Westinghouse.

During 1990, direct sales accounted for about 84% of total sales as opposed to 66% of sales in 1989.

- Symix Systems also sells its products through approximately 80 independent distributors, which accounted for 16% of sales in 1990 and 34% of sales in 1989.

Geographic Markets

Approximately 97% of Symix Systems' 1990 revenue was derived from the U.S. and 3% from international sources.

The company markets its products in North America through a direct sales force and maintains 19 sales offices throughout the U.S., including 6 district offices and 13 satellite offices.

U.S. offices are located in Cincinnati and Columbus (OH); Indianapolis (IN); Grosse Point Farms and Okemos (MI); Elmhurst (IL); Charlotte and Wake Forest (NC); Austin and Dallas (TX); Plymouth Meeting (PA); Kansas City (MO); Duluth (GA); Fairfield (IA); Gig Harbour (WA); Marlboro and North Andover (MA); Tulsa (OK); Palm Harbor (FL); Birmingham (AL); and Campbell, Manhattan Beach, and Newport Beach (CA).

Symix Systems has distribution agreements with organizations in Canada, Europe, and Australia, but plans on establishing direct sales offices in these areas in order to expand its international market.

SYNERCOM TECHNOLOGY, INC.

2500 City West Boulevard
Suite 1100
Houston, TX 77042
Phone: (713) 954-7000
Fax: (713) 785-0880

President:	David J. Stewart
Status:	Public
Total Employees:	90
Total Revenue:	\$11,987,000
Fiscal Year End:	10/31/92

Key Points

- Synercom® Technology, Inc. (Synercom) provides integrated spatial systems solutions for major commercial and governmental organizations worldwide.
- Spatial database technology has evolved from its traditional association with engineering-only applications to an integrating component within organization-wide information systems. This change has fostered the need for applications to operate on multiple platforms in open system environments. Synercom has positioned its products to take advantage of the market opportunity, moving away from its original position as a turnkey vendor.
- Synercom also offers systems integration services to assist customers in designing, building and maintaining integrated systems including spatial database systems.
- In 1993, Synercom plans to aggressively pursue system integration contracts.
- Synercom experienced a decrease in revenues in fiscal 1992. In 1993, with the release of Synercom's new application, WMIS, the work management information system for the utilities industry, the company hopes to generate new sales to fuel increased revenue growth.

**Company
Description**

Synercom Technology, Inc., founded in 1969 as a Texas corporation and incorporated in Delaware in 1983, designs, develops, supports, and markets integrated spatial systems solutions (also known as geographic or geo-relational information systems) for major commercial and governmental organizations worldwide.

The company's products are targeted to organizations that are required to track, analyze, and manage geographically dispersed activities. Synercom directs its marketing efforts toward major electric, gas, and water utilities; municipal entities; and telecommunications companies.

Synercom solutions consist of products and services that integrate multiple applications and data across dissimilar platforms. The solutions are designed to maximize usage of new and existing data used in applications related to work management, Automated Mapping/Facilities Management (AM/FM), outage analysis and reporting, engineering analysis and other operational and financial applications associated with the management of geographically dispersed assets.

**Operations/
Structure**

Synercom markets its solutions in North America through a direct sales force and through distributors in Europe, the Far East, and Australia.

The company's headquarters are in Houston (TX). Other sales and service representatives are in major cities across the U.S.

As of October 31, 1992, Synercom had six direct sales representatives located in major cities throughout the U.S. and Canada.

The direct sales representatives and international distributors are supported by a telemarketing staff and other personnel located at Houston headquarters.

Strategy

Since 1983, Synercom has shifted from providing turnkey systems to providing applications software products and associated support services. The company has had a cooperative marketing partnership with DEC since 1984.

The company also plans to continue providing spatial information systems integration services, including data base conversion and management support, consulting, training, systems engineering, and project management.

Synercom focuses on three markets:

- Electric, Gas, and Water Utilities
- Telecommunications Companies
- Municipal Governments

Financials

Total fiscal 1992 revenue was approximately \$12 million, a 22% decrease from 1991 revenue of \$15.4 million. A five year financial summary follows:

**SYNERCOM TECHNOLOGY, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	10/92	10/91	10/90	10/89	10/88
Revenue	\$11,987	\$15,356	\$11,723	\$17,501	\$13,400
· Percent increase (decrease) from previous year	(22%)	31%	(33%)	31%	30%
Income (loss) before taxes	\$(3,828)	\$(501)	\$(1,691)	\$2,358 (a)	\$(2,142)
· Percent increase (decrease) from previous year	(665%)	(70%)	(172%)	210%	63%
Earnings (loss) per share	\$(0.67)	\$(0.09)	\$(0.28)	\$0.36	\$(0.35)

During the fourth quarter of fiscal 1992, Synercom expensed restructuring costs of approximately \$1,720,000 which included an estimate of expenses related to the relocation of the company's corporate headquarters to smaller, less expensive facilities and expenses related to a reduction in headcount.

Product licensing and sales revenues in fiscal 1992 decreased 35.2% compared to fiscal 1991. Revenue declines during fiscal 1992 were attributed primarily to a reduction in revenues from product licensing and sales which include the licensing of Synercom software products and the resale of other vendors' products as part of Synercom's spatial systems solutions.

Revenues from Digital Equipment, U.K. for the British Gas Records System were approximately \$1,912,000 and \$2,662,000, respectively, for the fiscal years ended October 31, 1992 and 1991.

Export revenues were \$5.24 million (approximately 43.7% of revenue) in fiscal 1992.

Services revenues decreased 6.9% during fiscal 1992 due to a decrease in revenue from the consulting sector and the continued decline in proprietary hardware support revenue as the number of systems under hardware maintenance decreased, as planned. Effective December 31, 1992, SYnercom no longer offers hardware maintenance of its proprietary workstations.

Alliances

- Synercom and Baltimore Gas & Electric have entered into a joint development effort to launch a new (CIA) customer interruption analysis product in 1993.
- Synercom's Cooperative Marketing Partners' program, introduced during fiscal 1990, further leverages the capabilities of INFORMAP and associated products. Synercom is integrating into its spatial systems solutions a variety of software that has been developed by its Cooperative Marketing Partners and that can be relicensed or resold by Synercom.
- During fiscal 1990, Synercom signed agreements with various vendors to provide products and services that can be integrated into Synercom solutions, including AUDRE, Inc., Hitachi America, Interleaf, Mapping Information Systems Corporation, Oracle Corporation, and Stoner Associates.
- Synercom also has Cooperative Marketing Partners program agreements with DEC, Data General, and IBM which allow Synercom to market various hardware platforms as part of its spatial systems.

Employees

As of May 1993, Synercom had 90 employees.

Competition

The spatial systems market is highly competitive. In the area of automated mapping and facilities management (AM/FM), Synercom's competitors include Intergraph Corporation, Environmental System Research Institute (ESRI), GeoVision Corporation, IBM, and McDonnell Douglas' Systems Integration Division (Purchased by EDS).

In the work management applications market, a number of competitors are emerging including Andersen Consulting and IBM, as well as companies that provide only work management systems, such as Computer Systems & Applications, and TTI Technologies.

Key Products and Services

Approximately 53% of Synercom's fiscal 1992 revenue was derived from application software products and 47% from software support services. A three-year summary of revenue sources, as provided by Synercom, follows:

SYNERCOM TECHNOLOGY, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)

	FISCAL YEAR					
	10/92		10/91		10/90	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
SOFTWARE PRODUCT LICENSES	\$5.2	(43%)	\$8.2	53%	\$5.4	46%
SUPPORT SERVICES	\$6.7	(57%)	\$7.1	47%	6.3	54%
TOTAL	\$11.9	100%	\$15.3	100%	\$11.7	100%

The company offers and licenses certain software products on host processors, with other products being licensed on a "per workstation" basis. Synercom software operates on the entire line of standard, unmodified DEC VAX and MicroVAX series computers and VAXstation workstations. The company also supports workstations based on Tektronix terminals, IBM PCs, and IBM-compatible PCs, as well as its own proprietary workstations. The Synercom system integrates with corporate systems through DEC's networking capability.

Synercom's software products are organized into four categories:

- Spatial information management software
- Software development tools
- Application solutions
- Networking and interface software

Spatial Information Management Software

INFORMAP, the foundation of Synercom's product line, combines spatial, graphic, and associated attribute data in an integrated spatial data base. Spatial data and related attribute information are stored by geographic location. Data can be referenced directly by location or by logical partitioning, enabling access of a particular set of data in any area of interest without sequential searching of the data base.

- During fiscal 1992, Synercom developed significant software enhancements and updates to existing products. The INFORMAP release provided expanded layer support, a new "quick plotting" option and support for the new Synercom License Management Facility. New developments also included extension of the relational data base capabilities of the INFORMAP/RDBMS with sophisticated linear topological modeling and analysis capabilities.
- INFORMAP supports distributed processing and provides distributed data base capabilities, allowing users to configure their network environments according to specific functional and operational requirements.
- INFORMAP/R and INFORPLOT/R, released in 1990, are part of a suite of data base building technologies that provide integrated raster/vector processing and information management capabilities for incremental conversion of manual records. This suite of products allows the integration of maps and documents into the spatial data base through the use of scanning technologies rather than through traditional, manual entry methods.

Software Development Tools

The company provides an extensive set of software development tools that enable Synercom or the user to build vertical-market applications upon the INFORMAP platform. Software development and productivity tools available from Synercom include the following:

- PLUSTM and PLUS1TM libraries contain many user-selected utility routines that address specific graphic, geometric, and data base management application functions.
- RULESTM enables customer-specific, rule-based procedures to be added to an INFORMAP application.
- Applications written using PLUS, PLUS1, or RULES have the same relationship to INFORMAP as standard commands within that product.

Applications Software Solutions

Applications software options that operate with INFORMAP are available from Synercom. These products are designed to address unique vertical-market requirements and include the following:

- WMISTM is for use primarily in companies in the utilities industry to automate work management functions. WMIS allows organizations to organize work management into a cohesive process, combining a modular design with a systems integration implementation. Synercom acquired the worldwide, exclusive marketing rights to WMIS from Commonwealth Electric Company in fiscal 1991.
- OPISTTM (Outside Plant Information System), introduced in 1984 and updated in 1988, is designed to meet the needs of telephone outside-plant engineering professionals. OPIS is used to plan, design, and manage the physical cable and equipment assets and logical wire-pair network as a detailed, connected model from the central office to the individual subscribers. OPIS is presently installed at a number of major telecommunications companies in the U.S. and abroad.
- EMISTTM (Environmental Mapping Information System), updated in 1988, provides extended topological processing, analysis, and thematic presentation functions. EMIS integrates with INFORMAP for direct, interactive use. The system works on data with or without topology and supports environmental studies, location assessment, demography, and other planning and resource management applications.
- CIA (Customer Interruption Analysis), planned for release in 1993, provides an application system that monitors electric distribution events or outages to quantify performance and proactively identify areas requiring attention. The goal is to achieve a full understanding of each outage and identify which customers were affected and how outages can be prevented.

Networking and Interfacing Software

Networking and interfacing applications software includes the following:

- Synercom can currently offer workstation software products that permit use of Apple Macintosh microcomputers, Data General Avion workstations, DEC VAXstations, IBM and compatible PCs, Tektronix terminals, and X Windows terminals. Users can connect a variety of peripheral devices to the systems, including digitizer tables, hardcopiers, printers, and plotters.
- Synercom also provides communications interfaces that work with standard SNA, NFS, DECnet, and TCP/IP communications protocols to permit interconnection of Synercom's software with Data General, DEC, IBM, Sun Microsystems and other computer systems and with data management applications software resident on such systems.

Substantially all of the company's existing software customers have entered into software maintenance contracts for software products. Each customer has toll-free access to Synercom's software support staff at corporate headquarters.

Synercom also provides customers with on-line access through the Synercom Users Network to updated information on Synercom products and services. Software support services also include distribution of periodic product updates and enhancements.

Synercom no longer manufactures or offers support for its own proprietary line of workstations.

System Integration Services

During fiscal 1990, Synercom began restructuring its service offerings to offer a broad range of systems integration services to ensure the successful deployment of its spatial information systems. These services include custom software development, systems engineering, systems installation, data base design and management, applications consulting, applications integration, training, and product support.

Synercom also offers systems integration services that assist customers in designing and building their data bases, including the definition and management of conversion strategies.

Clients

Synercom's target markets for its products include telecommunications companies; water, gas, and electric utilities; and municipal entities. The company has over 200 installations of its software products worldwide.

A sample of current Synercom clients, by industry, includes the following:

- Telephone companies: British Columbia Telephone Company, Continental Telephone Company, Hargray Telephone, Indiana Bell, Korea Telecommunications Authority, North Pittsburgh Telephone, Pacific Bell, and Taiwan Telephone.
- Electric and gas utilities: Alabama Power Company, American Electric Power Company, Baltimore Gas & Electric, Bonneville Power Administration, British Gas, Carolina Power & Light Company, Duisburg Electric (West Germany), Houston Lighting & Power Company, Louisville Gas & Electric, and Virginia Power.
- Government: U.S. Defense Mapping Agency, City of Burnaby (British Columbia), City of Houston, City of Long Beach, Lane Council of Governments, New York City, Wessex Water Authority, and the City of Zurich.
- Natural resources organizations: Alaska Department of Natural Resources, Aramco Company, Conoco, Energy Resources Conservation Board (Calgary), Tenneco, and the Railroad Commission of Texas.

Industry Markets

Synercom's fiscal 1992 revenue was derived from telecommunications companies; water, electric, and gas utilities; and municipal entities.

Geographic Markets

Approximately 56% of Synercom's fiscal 1992 revenue was derived from the U.S. and 44% from export sales (including Canada). A three-year summary of geographic source of revenue follows:

SYNERCOM TECHNOLOGY, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)

	FISCAL YEAR					
	10/92		10/91		10/90	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Domestic sales	\$6.7	56%	8.7	57%	\$6.5	56%
Export sales	\$5.2	44%	\$6.6	43%	5.2	44%
TOTAL	\$11.9	100%	\$15.3	100%	\$11.7	100%

COMPANY PROFILE

SYNERCOM TECHNOLOGY, INC.

2500 City West Boulevard
Suite 1100
Houston, TX 77042
(713) 954-7000

Robert W. Forsyth, President & CEO
Public Corporation, OTC
Total Employees: 169
Total Revenue, Fiscal Year End
10/31/90: \$11,723,000

The Company

Synercom Technology, Inc., founded in 1969 as a Texas corporation and incorporated in Delaware in 1983, designs, develops, supports, and markets spatial systems solutions (also known as geographic or geo-relational information systems) for major commercial and governmental organizations worldwide.

- The nucleus of the company's software product line is INFORMAP[®], a spatial information management system.
- The company's products are targeted to organizations that are required to track, analyze, and manage geographically dispersed activities and activities affecting their assets. Synercom directs its marketing efforts toward major electric, gas, and water utilities; municipal entities; and telecommunications companies.
- Since 1983, Synercom has shifted from providing turnkey systems to providing applications software products and associated support services. The company has had a cooperative marketing partnership with DEC since 1984.

During 1991, Synercom plans to bring to market the first release of INFORMAP integrated with the ORACLE relational data base management system (INFORMAP/RDBMS) and INFORMAP for the UNIX environment. The company also plans to continue providing spatial information systems integration services, including data base conversion and management support, consulting, training, systems engineering, and project management.

**SYNERCOM TECHNOLOGY, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	10/90	10/89	10/88	10/87	10/86
Revenue	\$11,723	\$17,501	\$13,400	\$10,278	\$17,325
• Percent increase (decrease) from previous year	(33%)	31%	30%	(41%)	--
Income (loss) before taxes	\$(1,691)	\$2,358	\$(2,142)	\$(5,626) (a)	\$1,688
• Percent increase (decrease) from previous year	(172%)	210%	63%	(430%)	--
• Gross margin	N/A	13%	N/A	N/A	10%
Net income (loss)	\$(1,691)	\$2,306 (b)	\$(2,142)	\$(5,626)	\$1,683
• Percent increase (decrease) from previous year	(173%)	208%	63%	(430%)	--
• Net margin	N/A	13%	N/A	N/A	10%
Earnings (loss) per share	\$(0.28)	\$0.36	\$(0.35)	\$(0.92)	\$0.28
• Percent increase (decrease) from previous year	(178%)	203%	62%	(428%)	(13%)

- (a) Includes approximately \$1.6 million in one-time restructuring and reorganization costs as part of the company's strategy to become solely a software and services firm. Hardware manufacturing operations were phased out, causing a writedown of existing inventory.
- (b) Includes a \$772,000 tax benefit of net operating loss carryforward.

Revenue declines during fiscal 1990 were attributed primarily to a reduction in aggregate revenues resulting from delays in the build-out of the spatial systems for Digital Equipment, U.K. and Pacific Bell; and, to a lesser extent, a decrease in international revenues resulting from the timing of the build-out of existing spatial systems.

- Revenues from Digital Equipment, U.K. and Pacific Bell were approximately \$2.5 million and \$0.7 million, respectively, for fiscal 1990, compared to \$4.4 million and \$2.5 million, respectively, in fiscal 1989.
- Synercom does not expect to license substantial amounts of additional software products to Pacific Bell until Pacific Bell

has successfully completed the conversion of outside plant records into digital format in its first implementation district. Conversion is not expected to occur until late in fiscal 1991.

- However, Digital's customer, British Gas, is expected to continue expanding the implementation of its Digital Records System project, and license additional software products.
- Export revenues were \$5.2 million (44% of revenue) in fiscal 1990, compared to over \$8.5 million (49% of revenue) in fiscal 1989.
- Services revenues declined 7% during fiscal 1990 due to a continued decline in hardware support revenues as the number of systems under hardware maintenance decreased and, to a lesser extent, a decline in consulting services revenues. The decrease was offset by the continued increase in software support revenues.

Research and product development expenditures were approximately \$2.9 million (24% of revenue) in fiscal 1990, \$2.7 million (16% of revenue) in fiscal 1989, and \$2.8 million (21% of revenue) in fiscal 1988. The company also had capitalized research and development costs of \$1.1 million in fiscal 1990, \$764,000 in fiscal 1989, and \$225,000 in fiscal 1988.

As of October 1990, Synercom had 169 employees. For fiscal 1990, revenue per employee was approximately \$69,370.

Revenue for the three months ending January 31, 1991 reached \$3.8 million, a 29% increase over \$3.0 million for the same period a year ago. Net income was \$269,000, compared to net losses of \$486,000 for the same period in 1990.

Synercom's competitors include Intergraph Corporation, Environmental System Research Institute (ESRI), GeoVision Corporation, McDonnell Douglas, and IBM.

Key Products and Services

Approximately 46% of Synercom's fiscal 1990 revenue was derived from application software products and 35% from software support services. The remaining 19% was derived from consulting services and hardware support. A three-year summary of revenue sources, as provided by Synercom, follows:

**SYNERCOM TECHNOLOGY, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	10/90		10/89		10/88	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software product licenses	\$5.4	46%	\$10.7	61%	\$7.4	55%
Support services (a)	6.3	54%	6.8	39%	5.5	41%
Hardware sales	--	--	--	--	0.5	4%
TOTAL	\$11.7	100%	\$17.5	100%	\$13.4	100%

(a) Software support revenue was \$4.1 million, \$3.8 million, and \$2.6 million for fiscal 1990, 1989, and 1988, respectively.

Synercom's target markets for its products include telecommunications companies; water, gas, and electric utilities; and municipal entities. The company has over 200 installations of its software products worldwide.

- The company offers and licenses certain software products on host processors, with other products being licensed on a "per workstation" basis. Synercom software operates on the entire line of standard, unmodified DEC VAX and MicroVAX series computers and VAXstation workstations. The company also supports workstations based on Tektronix terminals, IBM PCs, and IBM-compatible PCs, as well as its own proprietary workstations. The Synercom system integrates with corporate systems through DEC's networking capability.

Synercom's software technologies are organized into five categories:

- Spatial information management software
- Software development tools
- Optional application solutions
- Cooperative Marketing Partners' software
- Networking and interface software

INFORMAP, the foundation of Synercom's product line, combines spatial, graphic, and associated attribute data in an integrated spatial data base. Data can be referenced directly by location or by logical partitioning, enabling access of a particular set of data in any area of interest without sequential searching of the data base.

- During fiscal 1990, Synercom delivered two releases of INFORMAP, including INFORMAP 2.0, which supports the X Windows user interface environment and direct permanent storage edit capabilities.
- INFORMAP supports distributed processing and provides distributed data base capabilities, allowing users to configure their network environments according to specific functional and operational requirements.
- INFORMAP/R and INFORPLOT/R, released in 1990, are part of a suite of data base building technologies that provide integrated raster/vector processing and information management capabilities for incremental conversion of manual records. This suite of products allows the integration of maps and documents into the spatial data base through the use of scanning technologies rather than through traditional, manual entry methods.
- INFORMASTER™, introduced in fiscal 1988, is a module that manages INFORMAP data bases in a distributed data base and processing environment using DEC's DECnet networking architecture. The product allows users to build a distributed information system with multiple computer systems and data bases.

Application software options that operate with INFORMAP are available from Synercom. These products are designed to address unique vertical-market requirements and include the following:

- OPIS™ (Outside Plant Information System), introduced in 1984 and updated in 1988, is designed to meet the needs of telephone outside-plant engineering professionals. OPIS is used to plan, design, and manage the physical cable and equipment assets and logical wire-pair network as a detailed, connected model from the central office to the individual subscribers. OPIS is presently installed at a number of major telecommunications companies in the U.S. and abroad.
- EMIS™ (Environmental Mapping Information System), updated in 1988, provides extended topological processing, analysis, and thematic presentation functions. EMIS integrates

with INFORMAP for direct, interactive use. The system works on data with or without topology and supports environmental studies, location assessment, demography, and other planning and resource management applications.

Software development and productivity tools available from Synercom include the following:

- The company provides an extensive set of software development tools that enable Synercom or the user to build vertical-market applications upon the INFORMAP platform.
- PLUSTM and PLUS1TM libraries contain many user-selected utility routines that address specific graphic, geometric, and data base management application functions.
- RULESTM enables customer-specific, rule-based procedures to be added to an INFORMAP application.
- Applications written using PLUS, PLUS1, or RULES have the same relationship to INFORMAP as standard commands within that product.

Networking and interfacing software includes the following:

- Synercom can currently offer workstation software products that permit use of Apple Macintosh microcomputers, Data General Aviiion workstations, DEC VAXstations, IBM and compatible PCs, Tektronix terminals, and X Windows terminals. Users can connect a variety of peripheral devices to the systems, including digitizer tables, hardcopiers, printers, and plotters.
- Synercom also provides communications interfaces that work with standard SNA, NFS, DECnet, and TCP/IP communications protocols to permit interconnection of Synercom's software with Data General, DEC, IBM, Sun Microsystems and other computer systems and with data management applications software resident on such systems.

Synercom's Cooperative Marketing Partners' program, introduced during fiscal 1990, further leverages the capabilities of INFORMAP and associated products. Synercom is integrating into its spatial systems solutions a variety of software (as well as hardware) that has been developed by its Cooperative Marketing Partners and that can be relicensed or resold by Synercom.

- During fiscal 1990, Synercom signed agreements with various vendors to provide products and services that can be integrated into Synercom solutions, including AUDRE, Inc., Hitachi America, Interleaf, Mapping Information Systems Corporation, Oracle Corporation, and Stoner Associates.
- Synercom also has Cooperative Marketing Partners program agreements with DEC, Data General, and IBM which allow Synercom to market various hardware platforms as part of its spatial systems.

Synercom no longer manufactures its own proprietary line of workstations. However, the company continues to support its proprietary workstations through its service program.

Substantially all of the company's existing software customers have entered into software maintenance contracts for these products. Each customer has toll-free access to Synercom's software and hardware support staff at corporate headquarters. Synercom also provides customers with on-line access through the Synercom Users Network to updated information on Synercom products and services. Software support services also include distribution of periodic product updates and enhancements.

During fiscal 1990, Synercom began restructuring to offer a range of systems integration services to ensure the successful deployment of its spatial information systems. These services include custom software development, systems engineering, systems installation, data base build management, applications consulting, applications integration, training, and product support.

- During fiscal 1991, Synercom will offer systems integration services that assist customers in designing and building their data bases, including the definition and management of conversion strategies.

Industry Markets

Synercom's fiscal 1990 revenue was derived from telecommunications companies; water, electric, and gas utilities; and municipal entities. Telecommunications companies and electric and gas utilities are currently Synercom's largest industry markets.

Synercom's marketing strategy is to penetrate the above markets with INFORMAP and to offer vertical-market application software that meets the specific needs of customers.

For fiscal 1990, Synercom's largest customers were British Gas (through an agreement with Digital Equipment, U.K.), which accounted for 21% (\$2.5 million) of revenue, and Pacific Bell, which accounted for over 6% (\$720,000) of revenue.

A sample of current Synercom clients, by industry, includes the following:

- Telephone companies: British Columbia Telephone Company, Continental Telephone Company, Hargray Telephone, Indiana Bell, Korea Telecommunications Authority, North Pittsburgh Telephone, Pacific Bell, and Taiwan Telephone.
- Electric and gas utilities: Alabama Power Company, American Electric Power Company, Baltimore Gas & Electric, Bonneville Power Administration, British Gas, Carolina Power & Light Company, Duisburg Electric (West Germany), Houston Lighting & Power Company, Louisville Gas & Electric, and Virginia Power.
- Government: U.S. Defense Mapping Agency, City of Burnaby (British Columbia), City of Houston, City of Long Beach, Lane Council of Governments, New York City, Wessex Water Authority, and the City of Zurich.
- Natural resources organizations: Alaska Department of Natural Resources, Aramco Company, Conoco, Energy Resources Conservation Board (Calgary), Tenneco, and the Railroad Commission of Texas.

During fiscal 1989, Synercom entered into an OEM agreement with Philips International B.V., which allows Philips non-exclusive rights to use Synercom systems in large, integrated systems worldwide.

Geographic Markets

Approximately 56% of Synercom's fiscal 1990 revenue was derived from the U.S. and 44% from export sales (including Canada). A three-year summary of geographic source of revenue follows:

**SYNERCOM TECHNOLOGY, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	10/90		10/89		10/88	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Domestic sales	\$6.5	56%	\$9.0	51%	\$8.5	63%
Export sales	5.2	44%	8.5	49%	4.9	37%
TOTAL	\$11.7	100%	\$17.5	100%	\$13.4	100%

Synercom sells its systems in the U.S. and Canada and through distributors in Europe, the Far East, the Middle East, and elsewhere.

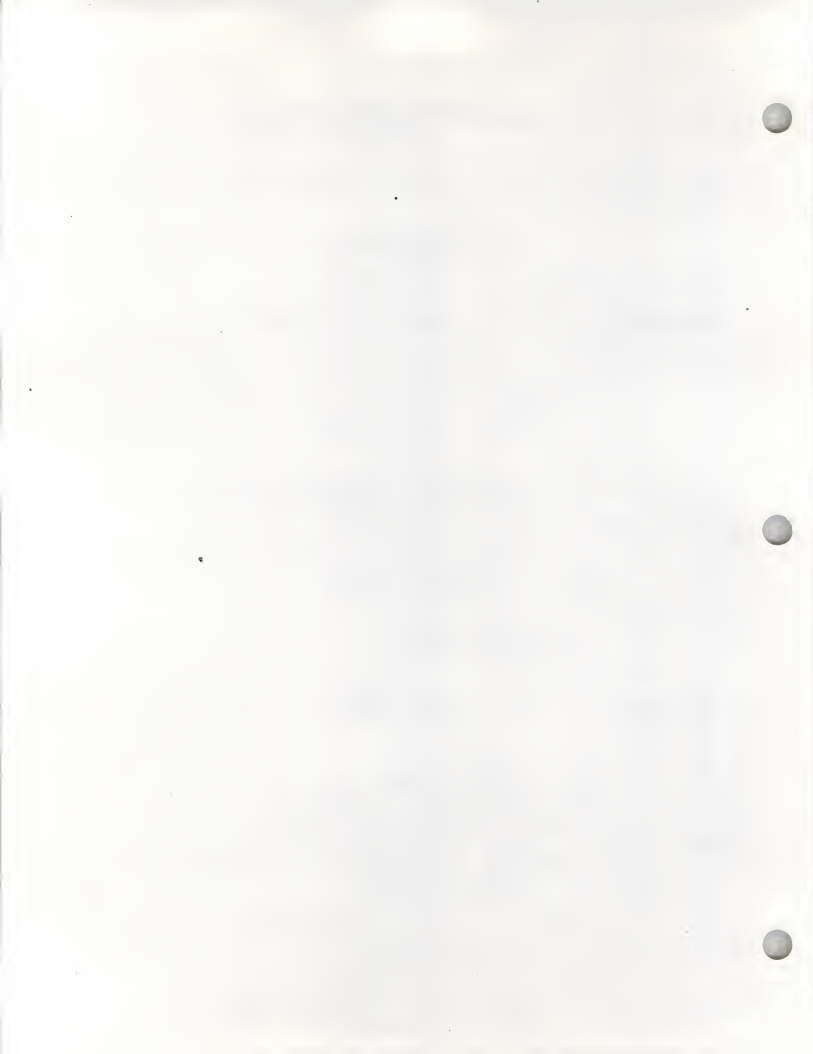
- As of October 31, 1990, Synercom had seven direct sales representatives located in major cities throughout the U.S. and Canada.
- The direct sales representatives and international distributors are supported by a telemarketing staff and other personnel located at Houston headquarters.

The company's headquarters are in Houston (TX). Other sales and service representatives are in major cities across the U.S.

**Computer
Hardware**

Synercom has the following computers installed:

- 2 DEC VAX 11/785s
- 1 DEC VAX 8350
- 2 DEC VAX 11/750s
- 1 DEC VAX 4000
- 3 DEC VAXstation 3500s
- 3 DEC VAXstation 3100s
- 12 DEC MicroVAX systems
- 5 Data General AViiONs
- 5 DEC DECstation 3100s



COMPANY PROFILE

SYNERCOM TECHNOLOGY, INC.

2500 City West Boulevard, Suite 1100
Houston, TX 77042
(713) 954-7000

Robert W. Forsyth, President & CEO
Public Corporation, OTC
Total Employees: 171
Total Revenue, Fiscal Year End
10/31/89: \$17,501,000

The Company

Synercom Technology, Inc., founded in 1969 as a Texas corporation and incorporated in Delaware in 1983, designs, develops, supports, and markets spatial information management systems (also known as geographic or geo-relational information systems) for major commercial and governmental organizations worldwide.

- The company's products are targeted to organizations that are required to track, analyze, and manage geographically dispersed activities and activities affecting these assets. Synercom directs its marketing efforts toward major electric, gas, and water utilities; federal, state, local and regional governments; and telecommunications companies.
- Since 1983, Synercom has shifted from providing turnkey systems, to providing applications software products and associated support services. The company has had a cooperative marketing partnership with DEC since 1984.

During 1990, Synercom plans to bring to market products that support X Window, UNIX, and relational data base management technology. The company also plans to provide spatial information systems integration services, including data base conversion management support, systems engineering, and project management.

**SYNERCOM TECHNOLOGY, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	10/89	10/88	10/87	10/86	10/85
Revenue	\$17,501	\$13,400	\$10,278	\$17,325	\$17,002
• Percent increase (decrease) from previous year	31%	30%	(41%)	--	87%
Income (loss) before taxes	\$2,358	\$(2,142)	\$(5,626)	\$1,688	\$1,626
• Percent increase (decrease) from previous year	210%	63%	(430%)	--	131%
• Gross margin	13%	N/A	N/A	10%	10%
Net income (loss)	\$2,306	\$(2,142)	\$(5,626)	\$1,683	\$1,626
• Percent increase (decrease) from previous year	208%	63%	(430%)	--	131%
• Net margin	13%	N/A	N/A	10%	10%
Earnings (loss) per share	\$0.36	\$(0.35)	\$(0.92)	\$0.28	\$0.32
• Percent increase (decrease) from previous year	203%	62%	(428%)	(13%)	131%

(a) Includes approximately \$1.6 million in one-time restructuring and reorganization costs as part of the company's strategy to become solely a software and services firm. Hardware manufacturing operations were phased out, causing a writedown of existing inventory.

(b) Includes a \$772,000 tax benefit of net operating loss carryforward.

Synercom management attributes revenue growth in fiscal 1989 to the continued acceptance by large organizations of the Synercom INFORMAP software product line for distributed network environments and related services.

- The company experienced continued success in international markets. Export revenue rose 74%, from \$4.9 million in fiscal 1988 to over \$8.5 million in fiscal 1989.
- Services revenue increased 23% during fiscal 1989 due to increased software support and consulting services revenues. However, this increase was offset to a degree by the continued decline in hardware support revenues as the number of systems under hardware maintenance decreased.

Research and product development expenditures were approximately \$2.7 million (16% of revenue) in fiscal 1989, \$2.8 million (21% of revenue) in fiscal 1988, and \$2.5 million (24% of revenue) in fiscal 1987. The company also had capitalized research and development costs of \$764,000 in fiscal 1989, \$225,000 in fiscal 1988, and \$325,000 in fiscal 1987.

As of October 1989, Synercom had 171 employees. For fiscal 1989, revenue per employee was approximately \$102,345.

Synercom's major competitors are Intergraph Corporation, Environmental System Research Institute (ESRI), GeoVision Corporation, and IBM.

Key Products and Services

Approximately 61% of Synercom's fiscal 1989 revenue was derived from application software products and 22% from software support services. The remaining 17% was derived from consulting services. A three-year summary of revenue sources, as provided by Synercom, follows:

SYNERCOM TECHNOLOGY, INC. THREE-YEAR SOURCE OF REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR					
	10/89		10/88		10/87	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software product licenses	\$10.7	61%	\$7.4	55%	\$4.5	44%
Support services (a)	6.8	39%	5.5	41%	5.6	54%
Hardware sales	--	--	0.5	4%	0.2	2%
TOTAL	\$17.5	100%	\$13.4	100%	\$10.3	100%

(a) Software support revenue was \$3.8 million, \$2.6 million, and \$2.7 million for fiscal 1989, 1988, and 1987, respectively.

Synercom's target markets for its products include telecommunications companies; gas and electric utilities; and federal, local, state, and regional government. The company has over 200 installations of its software products worldwide.

Synercom's software products are organized into four categories:

- The foundation INFORMAP™ spatial information management system.
- Application software products that build upon the INFORMAP product to serve the mapping needs of specific industries.
- Software development and productivity tools.
- Networking and interface software used to link INFORMAP to outside computers and terminals in a network environment.
- The company offers and licenses certain software products on host processors, with other products being licensed on a "per workstation" basis. Synercom software operates on the entire line of standard, unmodified DEC VAX and MicroVAX series computers and VAXstation workstations. The company also supports workstations based on Tektronix terminals, IBM PCs, and IBM-compatible PCs, as well as its own proprietary workstations. The Synercom system integrates with corporate systems through DEC's networking capability.

INFORMAP, a product update released in fiscal 1988, is the foundation of Synercom's product line. INFORMAP integrates spatial, graphic, and attribute data in a single spatial data base and is designed to handle large amounts of spatially oriented data.

- INFORMAP stores spatial data and related attribute information by geographic location. Data can be referenced by location or by logical partitioning.
- INFORMAP supports distributed processing and provides distributed data base capabilities, allowing users to configure their network environments according to specific functional and operational requirements.
- INFORMASTER™, introduced in fiscal 1988, is a module that manages INFORMAP data bases in a distributed data base and processing environment using DEC's DECnet networking architecture. The product allows users to build a distributed information system with multiple computer systems and data bases.

Application software options that operate with INFORMAP are available from Synercom. These products are designed to address unique vertical-market refinements and include the following:

- OPIS™ (Outside Plant Information System), introduced in 1984 and updated in 1988, is designed to meet the needs of telephone outside-plant engineering professionals. OPIS is used to plan, design, and manage the physical cable and equipment assets and logical wire-pair network as a detailed, connected model from the central office to the individual subscribers. OPIS is presently installed at a number of major telecommunications companies in the U.S. and abroad.
- EMIS™ (Environmental Mapping Information System), updated in 1988, provides extended topological processing, analysis, and thematic presentation functions. EMIS integrates with INFORMAP for direct, interactive use. The system works on data with or without topology and supports environmental studies, location assessment, demography, and other planning and resource management applications.
- INFOTRACE-E™ performs analytical operations on a data base containing facilities elements such as electrical, gas, water, or similar distribution networks.
 - Developed for gas, electric, and water utilities, the product determines the shortest path between elements and supports the logical switching of a segment from one circuit to another.
- CARTRAN™, a coordinate transformation package, permits the transformation from one supported map projection to another.
 - These projections include Universal Transverse Mercator, State Plane, Albers Conical Equal Area, Lambert Conformal Conic, Mercator, Polar Stereographic, Polyconic, Traverse Mercator, Stereographic, and Oblique Mercator.
 - CARTRAN was developed for exploration firms, utilities, transportation departments, and others involved in large-area mapping.

Software development and productivity tools available from Synercom include the following:

- The company provides an extensive set of software development tools that enable Synercom or the user to build vertical-market applications upon the INFORMAP platform.
- PLUSTM and PLUS1TM libraries contain many user-selected utility routines that address specific graphic, geometric, and data base management application functions.
- RULESTM enables customer-specific, rule-based procedures to be added to an INFORMAP application.

Applications written using PLUS, PLUS1, or RULES have the same relationship to INFORMAP as standard commands within that product.

Networking and interfacing software includes the following:

- ITSTM (INFORMAP Tektronix Station), introduced in 1988, allows Tektronix 4100- and 4200-series terminals to operate in the INFORMAP environment as graphics workstations.
- IWSTM (INFORMAP Windows Station), introduced in 1988, interfaces INFORMAP to the personal computer environment, such as the IBM PC series, IBM compatibles, or the IBM PS/2 series. The IWS interface is implemented under Microsoft Windows. Synercom is currently migrating the user interface for all products to the industry-standard X Window environment.
- Synercom also provides communications interfaces that work with standard SNA and DECnet communications protocols to permit interconnection of the company's VAX-based systems with IBM and DEC computer systems and with data management and applications software resident on such systems.

Synercom no longer manufactures its own proprietary line of workstations. However, the company continues to support its proprietary workstations through its service program.

Synercom provides software and hardware support and consulting services.

Substantially all of the company's existing software customers have entered into software maintenance contracts and have attended training sessions for these products. The company expects software services revenues to continue to increase.

Industry Markets

Synercom's fiscal 1989 revenue was derived from telecommunications companies; electric and gas utilities; federal governments; and local, state and regional governments. Telecommunications companies and electric and gas utilities are currently Synercom's largest industry markets.

Synercom's marketing strategy is to penetrate the above markets with INFORMAP and to offer vertical-market application software that meets the specific needs of customers.

For fiscal 1989, Synercom's largest customers were British Gas (through an agreement with Digital Equipment, U.K.), which accounted for 25% of revenue, and Pacific Bell, which accounted for over 14% of revenue.

A sample of current Synercom clients, by industry, includes the following:

- Telephone companies: British Columbia Telephone Company, Continental Telephone Company, Hargray Telephone, Indiana Bell, Korea Telecommunications Authority, North Pittsburgh Telephone, Pacific Bell, and Taiwan Telephone.
- Electric and gas utilities: Alabama Power Company, American Electric Power Company, Bonneville Power Administration, British Gas, Carolina Power & Light Company, Duisburg Electric (West Germany), Houston Lighting & Power Company, and Virginia Power.
- Government: U.S. Defense Mapping Agency, City of Burnaby (British Columbia), City of Houston, City of Long Beach, Lane Council of Governments, New York City, Wessex Water Authority, and the City of Zurich.
- Natural resources organizations: Alaska Department of Natural Resources, Aramco Company, Conoco, Energy Resources Conservation Board (Calgary), Tenneco, and the Railroad Commission of Texas.

Geographic Markets

Approximately 51% of Synercom's fiscal 1989 revenue was derived from the U.S. and 49% from export sales (including Canada). A three-year summary of geographic source of revenue follows:

**SYNERCOM TECHNOLOGY, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	10/89		10/88		10/87	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Domestic sales	\$9.0	51%	\$8.5	63%	\$8.6	84%
Export sales	8.5	49%	4.9	37%	1.7	16%
TOTAL	\$17.5	100%	\$13.4	100%	\$10.3	100%

Synercom sells its systems in the U.S. and Canada through its direct sales force and value-added resellers (VARs). The company sells through distributors in Europe, the Far East, the Middle East, and elsewhere.

- During fiscal 1989, Synercom entered into an OEM agreement with Philips International B.V., which allows Philips non-exclusive rights to use Synercom systems in large, integrated systems worldwide.

The company's headquarters are in Houston (TX). The Vienna (VA) office concentrates on the federal market sector. Other sales and service representatives are in major cities in the U.S. and Canada.

**Computer
Hardware and
Software**

Synercom has the following computers installed:

- 2 DEC PDP-11/70s
- 1 IBM System 36

COMPANY PROFILE

SYNERCOM TECHNOLOGY, INC.

2500 City West Boulevard, Suite 1100
Houston, TX 77042
(713) 954-7000

Robert W. Forsyth, President & CEO
Public Corporation, OTC
Total Employees: 164
Total Revenue, Fiscal Year End
10/31/88: \$13,400,000

The Company

Synercom Technology, Inc., founded in 1969 as a Texas corporation and incorporated in Delaware in 1983, designs, develops, supports, and markets mapping data base management systems (also known as geographic or geo-relational information systems) for organizations that require extensive mapping, geographic, and related information in the management and operation of their businesses.

- Synercom previously marketed its software products bundled with DEC hardware as a turnkey system. In 1983 the company announced that it was unbundling its product. Clients would purchase the computer hardware and standard operating system from DEC and Synercom would install its software and workstations on the DEC-supplied system.
- In 1984 Synercom and DEC announced the formation of a cooperative marketing partnership whereby each company would endorse the marketing and support of the other's products.
 - A major procurement by British Gas in fiscal 1988 was a new account in partnership with Digital Equipment, U.K.

In March 1986, a prospectus was issued in anticipation of an initial public offering of Synercom common stock. Of the shares offered, 1.2 million were to be sold by the company and 1.0 million by selling shareholders. Net proceeds to Synercom of approximately \$17.4 million were used to repay bank debt, cumulative dividends on preferred stock, and a note payable. The remaining proceeds were added to working capital.

Fiscal 1988 revenue reached \$13.4 million, a 30% increase over fiscal 1987 revenue of \$10.3 million. Net losses in fiscal 1988 were \$2.1 million compared to net losses of \$5.6 million in fiscal 1987. A five-year financial summary follows:

**SYNERCOM TECHNOLOGY, INC.
FIVE-YEAR FINANCIAL SUMMARY**
(\$ millions, except per-share data)

ITEM	FISCAL YEAR				
	10/88	10/87	10/86	10/85	10/84
Revenue	\$13.4	\$10.3	\$17.3	\$17.0	\$9.1
• Percent increase (decrease) from previous year	30%	(41%)	--	87%	(5%)
Income (loss) before taxes	\$(2.1)	\$(5.6)	\$1.7	\$1.6	\$(5.1)
• Percent increase (decrease) from previous year	63%	(430%)	--	131%	(13%)
Net income (loss)	\$(2.1)	\$(5.6)	\$1.7	\$1.6	\$(5.1)
• Percent increase (decrease) from previous year	63%	(430%)	--	131%	(13%)
Earnings (loss) per share	\$(0.35)	\$(0.92)	\$0.28	\$0.32	\$(1.07)
• Percent increase (decrease) from previous year	62%	(428%)	(13%)	131%	(13%)

Synercom management attributes net losses during fiscal 1987 and 1988 to the following:

- During the past two years, Synercom significantly redirected the focus of its business and product offerings. To achieve this objective, the company made substantial investments in product development, customer services, marketing, and sales.
- The company incurred approximately \$1.6 million in one-time restructuring and reorganization costs in fiscal 1988 as part of its strategy toward becoming solely a software and services company. The hardware manufacturing operations were phased out, causing a writedown of existing inventory.
- Synercom made heavy investments in developing new products and enhancing its existing software line.

- Research and product development expenditures were approximately \$2.8 million (21% of revenue) in fiscal 1988, \$2.5 million (24% of revenue) in fiscal 1987, and \$2.7 million (16% of revenue) in fiscal 1986.
- The actual increases in research and development costs for fiscal 1987 and 1988 (2.0% and 9.4% respectively) are not reflected due to accounting procedure changes per the Statement of Financial Accounting Standard No. 86.
- Research expenses prior to November 1986 were expensed as incurred, whereas after November 1986 certain software development costs were required to be capitalized.
- Synercom made significant investments during fiscal 1988 to establish a fully staffed office in the Washington, D.C. area that will concentrate on sales to the federal government.

Revenue for the three months ending January 31, 1989 was \$4.3 million, a 5% increase over \$4.1 million for the same period in 1988. Net income for the period rose 690% from \$87,000 to \$688,000.

As of October 31, 1988 Synercom had approximately 164 employees.

Synercom's major competitors are Intergraph Corporation, Environmental System Research Institute (ESRI), GeoVision Corporation, and IBM.

Key Products and Services

Approximately 96% of Synercom's fiscal 1988 revenue was derived from application software products and support services; the remaining 4% was derived from proprietary hardware sales. A three-year summary of revenue sources, as provided by Synercom, follows:

**SYNERCOM TECHNOLOGY, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	10/88		10/87		10/86	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software product licenses	\$7.4	55%	\$4.5	44%	\$7.5	43%
Support services	5.5	41%	5.6	54%	4.8	28%
Hardware sales	0.5	4%	0.2	2%	5.0	29%
TOTAL	\$13.4	100%	\$10.3	100%	\$17.3	100%

Synercom's target markets for its products include telecommunications companies; gas and electric utilities; and federal, local, state, and regional government. The company has over 200 installations of its software products worldwide.

- Synercom's software products are organized into four categories:
 - The foundation INFORMAP™ mapping data base management software.
 - Application software products that build upon the INFORMAP product to serve the mapping needs of specific industries.
 - Software development and productivity tools.
 - Networking and interface software used to link INFORMAP to outside computers and terminals in a network environment.
- The company offers and licenses certain software products on host processors, with other products being licensed on a "per workstation" basis. Synercom software operates on the entire line of standard, unmodified DEC VAX and MicroVAX series computers and VAXstation workstations. The company also supports workstations based on Tektronix terminals, IBM PCs,

and IBM-compatible PCs, as well as its own proprietary workstations. The Synercom system integrates with corporate systems through DEC's networking capability.

INFORMAP, a product update released in fiscal 1988, is the foundation of Synercom's mapping data base management products, and integrates graphic and attribute data in a single geo-relational data base management system designed to handle large amounts of spatially oriented data. INFORMAP is composed of data management, data query, and map drafting functions in a modular design that permits customers to install these capabilities at once or in phases.

- Distributed processing and distributed data base capabilities enhance the system's high performance and flexibility. Users can configure their network environments according to specific functional and operational requirements.
- INFORMASTER™, introduced in fiscal 1988, is a module that manages INFORMAP data bases in a distributed data base and processing environment using DEC's DECnet networking architecture. The product allows users to build a distributed information system with multiple computer systems and data bases.

Application software options that operate with INFORMAP are available from Synercom. These products are designed to address unique vertical-market refinements and include the following:

- OPIS™ (Outside Plant Information System), introduced in 1984 and updated in 1988, is designed to meet the needs of telephone outside-plant engineering professionals. OPIS is used to plan, design, and manage the physical cable and equipment assets and logical wire-pair network as a detailed, connected model from the central office to the individual subscribers. Users can use OPIS to streamline outside-plant engineering functions.
 - OPIS is presently installed at a number of major telecommunications companies in the U.S. and abroad.
- EMIS™ (Environmental Mapping Information System), updated in 1988, is Synercom's geographic information system that provides extended topological processing, analysis, and thematic presentation functions. EMIS integrates with INFORMAP for direct, interactive use. The system works on data with or without topology and supports environmental studies, location assessment, demography, and other planning

and resource management applications.

- INFOTRACE-ETTM performs analytical operations on a data base containing facilities elements such as electrical, gas, water, or similar distribution networks.
 - Developed for gas, electric, and water utilities, the product determines the shortest path between elements and supports the logical switching of a segment from one circuit to another.
- CARTRANTM, a coordinate transformation package, permits the transformation from one supported map projection to another.
 - These projections include Universal Transverse Mercator, State Plane, Albers Conical Equal Area, Lambert Conformal Conic, Mercator, Polar Stereographic, Polyconic, Traverse Mercator, Stereographic, and Oblique Mercator.
 - CARTRAN was developed for exploration firms, utilities, transportation departments, and others involved in large-area mapping.

Software development and productivity tools available from Synercom include the following:

- The company provides an extensive set of software development tools that enable Synercom or the user to build vertical-market applications upon the INFORMAP platform.
- PLUSTM and PLUS1TM libraries contain many user-selected utility routines that address specific graphic, geometric, and data base management applications functions.
- RULESTM enables customer-specific, rule-based procedures to be added to an INFORMAP application.

Applications written using PLUS, PLUS1, or RULES have the same relationship to INFORMAP as standard commands within that product.

Networking and interfacing software includes the following:

- ITSTM (INFORMAP Tektronix Station), introduced in 1988, permits interfacing INFORMAP with Tektronix 4100- and 4200-series graphics terminals as workstations that allow the company's systems to communicate with industry-standard

plotters and screen copiers.

- IWS™ (INFORMAP Windows Station), introduced in 1988, allows interfacing INFORMAP to the personal computer environment, such as the IBM PC series, IBM compatibles, or the IBM PS/2 series. The IWS interface is implemented under Microsoft Windows™.
- Synercom also provides communications interfaces that work with standard SNA and DECnet communications protocols to permit interconnection of the company's VAX-based systems with IBM and DEC computer systems and with data management and applications software resident on such systems.

Synercom no longer manufactures its own proprietary line of workstations. However, the company continues to support its proprietary workstations through its service program.

Synercom provides software and hardware support services, with software support the overwhelming majority. Support services revenues decreased 2.1% from fiscal 1987 to fiscal 1988, primarily due to a decrease in the number of systems under hardware maintenance contracts.

Substantially all of the company's existing software customers have entered into software maintenance contracts and have attended training sessions for these products. The company expects software services revenues to continue to increase.

Industry Markets

Synercom's fiscal 1988 revenue was derived from telecommunications companies; electric and gas utilities; federal governments; and local, state and regional governments. Telecommunications companies and electric and gas utilities are currently Synercom's largest industry markets.

Synercom's marketing strategy is to penetrate the above markets with INFORMAP and to offer vertical-market application software that meets the specific needs of customers.

A sample of current Synercom clients, by industry, includes the following:

- Telephone companies: British Columbia Telephone Company, Continental Telephone Company, Hargray Telephone, Indiana Bell, Korea Telecommunications Authority, North Pittsburgh Telephone, Pacific Bell, and Taiwan Telephone.

- Electric and gas utilities: Alabama Power Company, American Electric Power Company, Bonneville Power Administration, Carolina Power & Light Company, Duisburg Electric (West Germany), Houston Lighting & Power Company, and Virginia Power.
- Government: U.S. Defense Mapping Agency, City of Burnaby (British Columbia), City of Houston, City of Long Beach, Lane Council of Governments, New York City, Wessex Water Authority, and the City of Zurich.
- Natural resources organizations: Alaska Department of Natural Resources, Aramco Company, Conoco, Energy Resources Conservation Board (Calgary), Tenneco, and the Railroad Commission of Texas.

Geographic Markets

Approximately 63.5% of Synercom's fiscal 1988 revenue was derived from the U.S. and 36.5% from export sales (including Canada). Export sales were approximately \$1.7 million (16.1% of revenue) in fiscal 1987 and \$6.0 million (34.7% of revenue) in fiscal 1986.

Synercom sells its systems in the U.S. and Canada through its direct sales force and Value-Added Resellers (VARs). The company sells through distributors in Europe, the Far East, the Middle East, and elsewhere.

The company's headquarters are in Houston (TX). The Vienna (VA) office concentrates on the federal market sector. Other sales and services representative are in major cities in the U.S. and Canada.

Computer Hardware and Software

Synercom has the following computers installed:

- 2 DEC PDP-11/70s.
- 1 IBM System 36.

COMPANY PROFILE

SYNERCOM TECHNOLOGY, INC.
10405 Corporate Drive
Sugar Land, TX 77478
(713) 240-5000

Thomas E. Moore, President & CEO
Public Corporation, OTC
Total Employees: 162
Total Revenue, Fiscal Year End
10/31/85: \$17,002,000

THE COMPANY

- Synercom Technology, Inc., founded in 1969, designs, develops, and markets mapping data base management systems for organizations that require extensive mapping, geographic, and related information in the management and operation of their business.
 - Synercom previously marketed its software products bundled with DEC hardware as a turnkey system. In 1983 the company announced that it was unbundling its product and that clients would purchase the computer hardware and standard operating system from DEC and Synercom would install its software and workstations on the DEC-supplied system.
 - In 1984 Synercom and DEC announced the formation of a cooperative marketing partnership whereby each company would support the marketing of the other's products.
- In March 1986, a prospectus was issued in anticipation of an initial public offering of Synercom common stock. Of the shares offered, 1.2 million were to be sold by the company and 0.8 million by selling shareholders. Net proceeds to Synercom of approximately \$17.9 million will be used to repay bank debt and for working capital.
- Fiscal 1985 revenue reached \$17 million, an 87% increase over fiscal 1984 revenue of \$9.1 million. Net income was \$1.6 million compared to net losses of \$5.1 million in fiscal 1984. A five-year financial summary follows:

SYNERCOM TECHNOLOGY, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousand, except per share data)

FISCAL YEAR ITEM	10/85	10/84	10/83	10/82	10/81
Revenue	\$ 17,002	\$ 9,081	\$ 9,538	\$ 9,212	\$ 12,366
• Percent change from previous year	87%	(5%)	4%	(26%)	N/A
Income (loss) before taxes	\$ 1,626	\$ (5,099)	\$ (4,500)	\$ (7,043)	\$ (1,355)
• Percent change from previous year	132%	(13%)	36%	(420%)	N/A
Net income (loss)	\$ 1,626	\$ (5,099)	\$ (4,500)	\$ (7,043)	\$ (1,355)
• Percent change from previous year	132%	(13%)	36%	(420%)	N/A
Earnings (loss) per share	\$ 0.32	\$ (1.07)	\$ (0.95)	\$ (1.66)	\$ (0.33)
• Percent change from previous year	130%	(13%)	43%	(403%)	N/A

- Synercom management attributes net losses during fiscal 1981, 1982, 1983, and 1984 to the following:
 - During the past five years, Synercom redirected the focus of its business and product offerings. To achieve this objective, the company made substantial investments in product development, customer services, marketing, and sales.
 - Mapping software previously designed to operate on DEC PDP-11 computers was rewritten and enhanced to operate on the DEC VAX family of computers.
 - The company also developed a new family of workstations and developed applications software products for selected vertical markets.
- Revenue declined in fiscal 1984 due to, among other factors, the company's decision in 1983 to begin offering its software products separately from the DEC computers on which they operate. The company returned to profitability in fiscal 1985.
- Research and development expenditures were approximately \$3.1 million (19% of revenue) in fiscal 1985, \$3.5 million (39% of revenue) in fiscal 1984, and \$3 million (31% of revenue) in fiscal 1983.

SYNERCOM TECHNOLOGY, INC.

- Revenue for the three months ending January 31, 1986 was \$4.6 million, a 17% increase over \$3.9 million for the same period in 1985. Net income for the period rose 244% from \$216,000 to \$744,000.
- Synercom's major competitor is Intergraph Corporation.

KEY PRODUCTS AND SERVICES

- Approximately 60% of Synercom's fiscal 1985 revenue was derived from application software products and associated support services. The remaining 40% was derived from hardware sales associated with the company's proprietary mapping workstation. A three-year summary of source of revenue, as provided by Synercom, follows:

SYNERCOM TECHNOLOGY, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)

FISCAL YEAR ITEM	10/85		10/84		10/83	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Software licenses and hardware sales	\$12.9	76%	\$6.3	69%	\$7.3	77%
Service	4.1	24	2.8	31	2.2	23
Total	\$17.0	100%	\$9.1	100%	\$9.5	100%

- Synercom's target markets for its products include telephone companies, gas and electric utilities, natural resources organizations, and government entities. The company has over 145 installations of its software products worldwide.
- Synercom's software products are organized into four categories--the foundation INFORMAP II mapping data base management software, application software products which build upon the INFORMAP II product to serve the mapping needs of specific industries, software development and productivity tools, and networking and interface software used to link INFORMAP II to outside computers and terminals. Software modules range in price from \$1,500 to \$365,000. A customer can acquire a set of modules for a system with a total software value of up to approximately \$900,000. Synercom software operates on the entire line of DEC computers, from the Micro VAX II to the VAX 8650.

- INFORMAP II, the foundation of Synercom's mapping data base management products, integrates graphic and attribute data in a single geo-relational data base management system designed to handle large amounts of spatially-oriented data. INFORMAP II is comprised of data management, data query, and map drafting functions in a modular design that permits customers to install these capabilities at once or in phases.
- Application software available from Synercom includes the following:
 - EIS (Engineering Information System) is comprised of three major components--OPIS, CORIS, and SCORE.
 - OPIS (Outside Plant Information System), introduced in 1984, automates the mapping and recordkeeping of a telephone company's outside plant assets. OPIS may be used to validate data entry, generate work prints, reassign cable pairs, study plant utilization, and update pre-posting and final posting of plant changes.
 - CORIS (Central Office Records Information System), announced in December 1985, aids in the design, management, recordkeeping, and maintenance of a telephone company's central office equipment. CORIS helps inside plant engineers design the physical layout of bays, racks, shelves and terminal blocks; create equipment specifications, and generate and trace central office equipment work orders.
 - SCORE (Service Control Operations Research and Evaluation), also announced in December 1985, allows a user to identify areas of customer concentration and telephone traffic patterns as well as assess and optimize revenues compared to product and service costs.
 - EMIS (Environmental Mapping Information System) provides numerous analytical and statistical mapping capabilities for use with the INFORMAP II data base. EMIS enables a user to manipulate and analyze the data base and associated statistical attributes in an area of interest, and to display the spatial distribution of the attributes in thematic maps.
 - INFOTRACE-E performs analytical operations on a data base containing facilities elements such as electrical, gas, water, or similar distribution networks.
 - Developed for gas, electric, and water utilities, the product determines the shortest path between elements and supports the logical switching of a segment from one circuit to another.

- ALIGN is used to produce engineering drawings of linear features such as pipelines, transmission lines, and highways. The software was developed primarily for exploration firms, engineering companies, and transportation departments.
- CIP provides contour interpolation of digital terrain models. Data obtained via either photogrammetric means or ground surveys can be used. The software was developed primarily for exploration firms, engineering companies, and transportation departments.
- TERRAIN ENGINEERING is a modular group of subsystems that access the INFORMAP II data base and use the information to perform functions such as road design, perspective viewing, volumetric computation, and mass haul computation. The product was developed primarily for exploration firms, transportation departments, and engineering firms.
- PAC/IN is a plan, profile, and cross-section package made up of INFORMAP II macros and FORTRAN programs.
 - Through PAC/IN, stereo compilation capabilities, survey commands, a mapping data base, and application programs are combined into an integrated system for producing a combined single-sheet drawing showing planimetric, profile, and cross-section views of any map area.
 - PAC/IN was developed for exploration firms, transportation departments, and engineering firms.
- CARTRAN, a coordinate transformation package, permits the transformation from one supported map projection to another.
 - These include Universal Transverse Mercator, State Plane, Albers Conical Equal Area, Lambert Conformal Conic, Mercator, Polar Stereographic, Polyconic, Traverse Mercator, Stereographic, and Oblique Mercator.
 - CARTRAN was developed for exploration firms, utilities, transportation departments, and others involved in large-area mapping.
- Software development and productivity tools available from Synercom include the following:
 - The company has developed a family of software development and productivity tools, known as the PLUS libraries, to aid in the development of user and industry-specific application software products. The PLUS libraries consist of graphic and data

management routines such as data input/output, data continuity checking, and data coordinate conversion.

- Ist Map is a group of vertical market products which contain a defined data base, menus, symbol tables, and sample data. It may be used without modifications or may be changed by a customer to meet unique requirements.
- Networking and interfacing software includes the following:
 - Synercom has developed special interface software which permits customers to use Tektronix 4100 series graphics terminals and IBM Personal Computers as workstations and allows the company's systems to communicate with industry-standard plotters and screen copiers.
 - The company provides communications interfaces that work with standard SNA and DECnet communications protocols to permit interconnection of the company's VAX-based systems with IBM and DEC computer systems and with data management and applications software resident on such systems.
- Synercom markets two mapping workstations, as follows:
 - The GWS IV raster-based workstation is designed for high-volume data entry by full-time operators. The GWS IV consists of dual black-and-white or color monitors and a precision electronic digitizing worktable with a hand-held cursor for data entry. Most customers purchase one or more GWS IV workstations for each INFORMAP II system they acquire. The GWS IV sells for in excess of \$50,000 per workstation.
 - The EWS engineering workstation is based on the standard IBM PC/AT with enhanced high-resolution color graphics processing capabilities provided by the company. The workstation is especially well suited for engineers who make extensive use of a customer's mapping data base but are not involved in full-time data entry. The company first released the EWS in the first quarter of calendar 1986.
- Service revenues increased 46% from fiscal 1984 to fiscal 1985 primarily because maintenance and education services were provided on a larger base of installed systems. Substantially all of the company's existing software customers have entered into software maintenance contracts.

INDUSTRY MARKETS

- Synercom's fiscal 1985 revenue was derived from the telephone industry, electric and gas utilities, government entities, and natural resources organizations. The telephone industry is currently Synercom's largest market. In fiscal 1984 and 1985 the telephone industry accounted for approximately 10% and 30% of total revenues, respectively.

SYNERCOM TECHNOLOGY, INC.

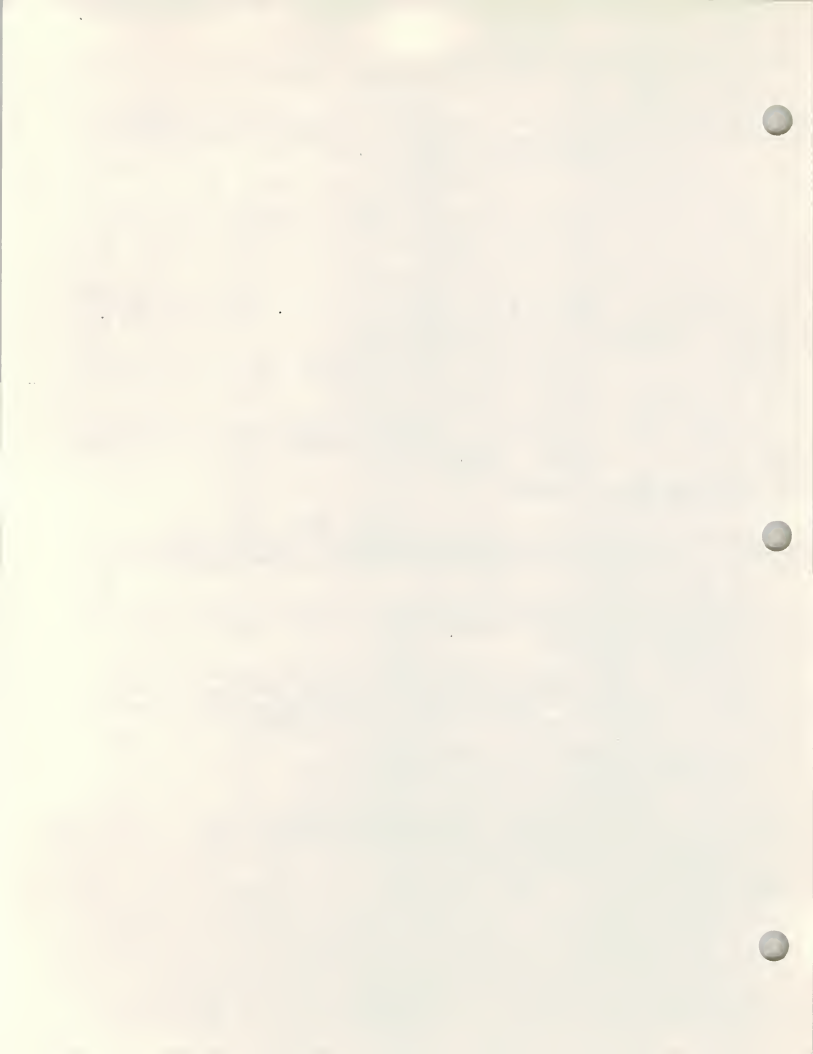
- Synercom's marketing strategy is to penetrate the above markets with INFORMAP II and to offer vertical market application software that meets the specific needs of customers.
- Current Synercom clients, by industry, include the following:
 - Telephone companies: AT&T, Bell Canada, British Columbia Telephone Company, Continental Telephone Company, Indiana Bell, Pacific Bell, and Taiwan Telephone.
 - Electric and gas utilities: Alabama Power Company, American Electric Power Company, Bonneville Power Administration, Carolina Power & Light Company, Duisburg Electric (West Germany), and Houston Lighting & Power Company.
 - Government: U.S. Defense Mapping Agency, City of Burnaby (British Columbia), City of Houston, New York City, Wessex Water Authority, and the City of Zurich.
 - Natural resources organizations: Aramco Company, Conoco, Energy Resources Conservation Board (Calgary), Tenneco, and the Railroad Commission of Texas.

GEOGRAPHIC MARKETS

- Approximately 74% of Synercom's fiscal 1985 revenue was derived from the U.S. and 26% from export sales (including Canada). Export sales were approximately \$1.2 million (14% of revenue) in fiscal 1984 and \$955,000 (10% of revenue in fiscal 1983).
- Synercom sells its systems in the U.S. and Canada through its direct sales force and in Western Europe, Japan, the Middle East, and elsewhere through distributors.
- Corporate headquarters are located in Sugar Land (TX), with sales offices in Dallas, Medina (OH), Red Bank and Gladstone (NJ), Atlanta, Kansas City Plainfield (IN), Glenview (IL), Plymouth (MA), Rockville (MD), Lakewood (CO), Costa Mesa and San Ramon (CA), and Rebstein, Switzerland.

COMPUTER HARDWARE AND SOFTWARE

- Synercom has the following computers installed:
 - 3 DEC VAX-11/780s, operating under VAX/VMS.
 - 4 DEC VAX-11/750s, operating under VAX/VMS.
 - 2 DEC PDP-11/70s.
 - 1 IBM System 36.



COMPANY PROFILE

SYNERCOM TECHNOLOGY, INC.

10405 Corporate Drive
Sugar Land, TX 77478
(713) 240-5000

Thomas E. Moore, President and CEO
Private Corporation
Total Employees: 180
Total Revenue, Fiscal Year End
10/30/84: \$10,000,000

THE COMPANY

- Synercom Technology, Inc., founded in 1969, provides software products for mapping information management. The company also markets a proprietary mapping workstation.
 - Synercom previously marketed its software products bundled with DEC hardware as a turnkey system. In 1982 the company announced that it was unbundling its product and that clients would purchase the computer hardware and standard operating system from DEC and Synercom would install its software and workstations on the DEC supplied system.
 - In 1984 Synercom and DEC announced the formation of a cooperative marketing partnership whereby each company would support the marketing of the other's products.
- Fiscal 1984 revenue reached \$10 million. Synercom management estimates 1985 revenue will reach \$15-20 million.
- In October 1984 Synercom had 180 employees. The company currently employs 180 people.
- Synercom's primary competitor is Intergraph. Other competition comes from Computervision, Environmental Systems Research Institute, Applicon, Auto-Trol, Calma, and McDonnell Douglas Information Systems Group.

KEY PRODUCTS AND SERVICES

- Approximately 80% of Synercom's fiscal 1984 revenue was derived from applications software products. The remaining 20% was derived from hardware sales associated with the company's proprietary mapping workstation.
- Synercom's target market for its products includes telephone companies, gas and electric utilities, exploration firms, natural resources agencies, engineering companies, municipalities, and the federal government. The company has over 150 installations of its DEC VAX-based software products and has sold over 500 proprietary mapping workstations.

- Synercom has enhanced and expanded its mapping product line. INFORMAP II^{T.M.}, the foundation of Synercom's product line, is a layered DEC VAX-based mapping software product that permits the user to build a mapping system in phases.
 - INFORMAP II consists of three interrelated levels of software. Each successive level adds progressively more sophisticated mapping information management functions.
 - INFOMAPPER^{T.M.} (level one) provides integrated graphics and basic data base management capabilities. The software's graphic capabilities automate drafting functions, converting map or drawing information to digital format. Data base management functions store and organize individual map sheet or drawing information and manages the records, information layers, symbols, and other data within each map sheet.
 - INFOMANAGER^{T.M.} (level two) adds enhanced data base management and manipulation capabilities. INFOMANAGER features a continuous digital map, advanced drawing maintenance functions, permanent storage edits, advanced coordinate geometry constructs, and polygonal processing.
 - INFOQUEST^{T.M.} (level three) adds relational modeling functions, a fourth-generation computing language, enhanced report writing, ad hoc query, application development, a data dictionary, and other productivity tools.
 - Pricing for INFORMAP II varies depending on which level is purchased and the number of levels purchased at one time.
 - There are currently over 150 installations of INFORMAP II and its predecessor product, INFORMAP.
- Other Synercom DEC VAX-based software products include the following:
 - IST MAP^{T.M.} packages are pre-structured and include ready-to-use data base design, graphic display tables, command menus, documentation, INFORMAP II routines, and other productivity tools. IST MAP packages are tailored to specific industries, including telephone companies, petroleum firms, electric utilities, gas utilities, public works agencies, municipalities, and drafting firms.
 - INFODAPT^{T.M.} is an interface between the INFORMAP II data base and various office-automation type workstations and terminals, including the IBM PC and Tektronix 4100 and 4100.
 - LIBERATOR permits Synercom software to run on an Intergraph VAX-based system. It provides the graphics and data base management functions of INFOMAPPER, an interface between the data base and

third-party terminals, and a standard interchange format for converting from Intergraph to Synercom format.

- Synercom has also developed a series of applications software products for specific industries to be used with INFORMAP II, as follows:
 - Outside Plant Information Software (OPIS/3) adds to INFORMAP II's graphics and data base management functions the capacity to automate engineering design and analytical functions.
 - This telephone industry product includes three components that provide such functions as cable throw, loop make-up reporting, cable fill calculation, and work print generation.
 - There are currently four OPIS/3 systems installed.
 - Environmental Mapping Information Software (EMIS) was developed for municipalities, natural resources agencies, pulp and paper companies, land management concerns, utilities, oil companies, and governmental agencies to meet the need for cartographic-quality geographic information management functions.
 - EMIS, an enhanced version of the Harvard Computer Graphic Laboratory's ODYSSEY software, provides extended geographic and topological capabilities including generating two- and three-dimensional thematic maps, polygon processing, overlay analysis of multiple coverages, and a range of analytical functions.
 - There are currently 32 EMIS systems installed.
 - INFOTRACE-E performs analytical operations on a data base containing facilities elements such as electrical, gas, water, or similar distribution networks.
 - Developed for gas, electric, and water utilities, the product determines the least path between elements and supports the logical switching of a segment from one circuit to another.
 - There are 10 INFOTRACE-E systems installed.
 - ALIGN is used to produce engineering drawings of linear features such as pipelines, transmission lines, and highways. The software was developed primarily for exploration firms, engineering companies, and transportation departments.
 - CIP provides contour interpolation of digital terrain models. Data obtained via either photogrammetric means or ground surveys can be used. The software was developed primarily for exploration firms, engineering companies, and transportation departments.

SYNERCOM TECHNOLOGY, INC.

- TERRAIN ENGINEERING is a modular group of subsystems that access the INFORMAP II data base and use the information to perform functions such as road design, perspective viewing, volumetric computation, and mass haul computation. The product was developed primarily for exploration firms, transportation departments, and engineering firms.
- PAC/IN is a plan, profile, and cross-section package made up of INFORMAP II macros and FORTRAN programs.
 - Through PAC/IN, stereo compilation capabilities, survey commands, a mapping data base, and application programs are combined into an integrated system for producing a combined single-sheet drawing showing planimetric, profile, and cross-section views of any map area.
 - PAC/IN was developed for exploration firms, transportation departments, and engineering firms.
- CARTRAN, a coordinate transformation package, permits the transformation from one supported map projection to another.
 - These include Universal Transverse Mercator, State Plane, Albers Conical Equal Area, Lambert Conformal Conic, Mercator, Polar Stereographic, Polyconic, Traverse Mercator, Stereographic, and Oblique Mercator.
 - CARTRAN was developed for exploration firms, utilities, transportation departments, and others involved in large-area mapping.
- Synercom's mapping workstations, the GWS IV, includes three microprocessors, a math coprocessor, and a raster display.

INDUSTRY MARKETS

- Synercom's fiscal 1984 revenue was derived from a variety of industries, including: gas and electric utilities; telephone companies; pipeline/petroleum firms; engineering and consulting firms; the federal government, including the military; and state and local government.

GEOGRAPHIC MARKETS

- Approximately 80% of Synercom's fiscal 1984 revenue was derived from the U.S. Twenty percent was derived from international sources.
- U.S. offices are located in Medina (OH), Red Bank (NJ), Marietta (GA), Kansas City (MO), Plainfield (IN), Costa Mesa and San Ramon (CA), and Sugar Land (TX).

SYNERCOM TECHNOLOGY, INC.

- Synercom has international offices in Switzerland and Canada. The company also has distributorship agreements with firms in Saudi Arabia, Hong Kong, Taiwan, Korea, Japan, Venezuela, South Africa, England, and Belgium.

COMPUTER HARDWARE AND SOFTWARE

- Synercom has the following computers installed:
 - 3 DEC VAX-11/780s, operating under VAX/VMS.
 - 4 DEC VAX-11/750s, operating under VAX/VMS.
 - 2 DEC PDP-11/70s.
 - 1 IBM System 36.



COMPANY HIGHLIGHT

SYNERCOM TECHNOLOGY, INC.
500 Corporate Drive
Sugar Land, TX 77478
(713) 491-5000

Thomas E. Moore, President
Private Corporation
Total Employees: 170
Total Revenue, Fiscal Year End
10/30/82: \$20,000,000*

THE COMPANY

- Synercom Technology, Inc., founded in 1969, provides DEC based turnkey systems for interactive graphics, mapping, and drafting; marine, structural, and metal building design; and steel fabrication.
- In late 1981 Synercom closed a private preferred stock placement that generated \$4 million of capital, handled by the venture group Adler & Company. Since that time, over \$10 million has been raised by equity funding ventures.
- The company increased research and development work by 250% in 1982.
- In October 1982 Synercom had 170 employees. The company currently employs 160 persons, divided by business segments as follows:

Marketing/sales	25
Research and development	60
Customer support	20
Maintenance	30
General/administrative	<u>25</u>
	160

- Major competitors of Synercom include Intergraph and Computervision.

KEY PRODUCTS AND SERVICES

- One hundred percent of Synercom's revenue is derived from DEC based turnkey systems.
- Synercom provides a modular turnkey system known as Information and Mapping System (INFORMAP). INFORMAP is an integrated engineering, graphic, mapping, and geographic data base management tool comprised of the following basic software components:
 - Mapping Interactive Graphics Digitizing System (MAP/IN) is a real time, interactive graphics package that facilitates the entry of engineering, geographic, and associated tabular data in the form of maps, aerial photographs, drawings, and records. The system allows multiple

*INPUT estimate

users to interact with the computer through graphics stations and other devices to produce multiple purpose maps, drawings, and reports.

- Information System for Mapping and Records Management (INFORM) is a data base management and report generation system designed for geographically organized graphic and related data. INFORM organizes all individual maps and associated records input through MAP/IN into a "Continuous Digital Map" to permit retrieval of maps and information by polygonal area (tax or school district, etc.), street address, or other geographic identifier.
- The INFORMAP basic turnkey system configuration price ranges from \$150,000 to \$400,000. There are over 90 systems installed.
- Synercom has developed a series of optional applications software products designed to run with INFORMAP. These applications include the following:
 - Coordinate Geometry Interactive System (COGO/I) is an interactive coordinate geometry system which provides geometric constructions and adjustments in support of high precision data input to INFORMAP. Over 90% of INFORMAP users use COGO/I.
 - Cartographic and Photogrammetric Interactive Data Acquisition System (CAP/IN) supports digital stereo compilation and direct capture of three-dimensional data from a stereo instrument.
 - Automated Drafting System (ADS) supports engineering design drafting and augments MAP/IN with capabilities such as subdrawings and automatic dimensioning specifically designed for producing schematic, mechanical, architectural, piping, and other engineering design drawings.
 - Reporting System for Drafting Applications (REPORT) is a project-oriented data base management system which facilitates production of equipment reports, cable lists, and estimates for single drawings or an entire design project.
 - Alignment Mapping System produces engineering drawings of linear features such as pipelines, transmission lines, and highways. The system produces fully annotated alignment drawings from survey notes and generates plan/profile/cross-section drawings.
 - TRACE performs analytical operations on a data base containing facility elements such as electrical, gas, water, or similar distribution networks.
 - Digital Terrain Model (DTM) analyzes the shape of three-dimensional surfaces, producing a uniformly spaced network of three-dimensional points from a group of randomly distributed input data. It may be used to compute profiles and cross-sections for a horizontal design.

- Contour Interpolation (CI) produces contours from randomly distributed three-dimensional input. Any attribute is available for contouring, and results are stored in a drawing which may be edited for final production.
- Cable TV (CATV) assists in the design of Cable TV or similar distribution networks. The system performs strand mapping and trunk and feeder design based on user-specified design criteria and pole locations. CATV is interactive and produces a bill of materials from the final design.
- Geodetic Surveying System performs data reduction functions associated with geodetic surveying, including vertical adjustment, horizontal adjustment of triangulation, trilateration, and open and close traverse data. The system also determines scale factors and convergence angles for UTM and STATE Plane grids and computes astronomic direction from Sun and Polaris observations.
- Analytical Aerotriangulation provides analytically extended ground control from monoscopic measurements of stereo photography using a simultaneous bundle adjustment. The system reduces camera calibration, develops first approximations, and performs a least-squares adjustment using weighting based on apriori knowledge of ground control. Dial settings for all absolute orientation for analog stereo instruments are produced.
- Semi-Analytical Aerotriangulation provides analytically extended control from stereo model measurements made on an encoded stereo instrument. It performs model and strip connect operations and simultaneous modeling of vertical and horizontal adjustment by a polynomial solution of user determined degree. The system produces absolute orientation dial settings for all analog stereo instruments.
- CARTRAN supports the conversion of geographic coordinates to plane projections commonly used in mapping. The system converts plane coordinates to geographic and can be used for a single point or an entire data base.
- Thematic Mapping provides land use planners and project designers with census mapping and analysis, environmental studies, route selection, land-use planning, natural resource management, site selection, and other land-related applications.
- Thematic Mapping was the result of an agreement signed in October 1982 between Synercom and the Environmental Systems Research Institute (ESRI) to integrate INFORMAP with ESRI's Polygon and Grid Cell Analysis.

SYNERCOM TECHNOLOGY, INC.

- In 1981 Synercom introduced a software interface that allows INFORMAP users to access the Geographic Base File/Dual Independent Map Encoding System (GBF-/DIME).
 - GBF/DIME is a U.S. Census Bureau data base containing all streets and certain landmarks based on 1980 U.S. census data.
 - Users who purchase certain GBF/DIME files from the U.S. Census Bureau can access the data on the INFORMAP system in conjunction with other applications they have installed.
- In March 1982 Synercom introduced the Terrain Engineering System (TES), a group of software subsystems which uses the INFORMAP data base to automate each step of an engineering project, from design to as-built.
 - TES component subsystems include Elevation Interpolation, Volumetric Computation, Alignment Mapping, Plan and Profile, Digital Terrain Model, Perspective Viewing, and Contour Interpolation.
 - The system runs on DEC PDP-11 and VAX processors.
- Synercom systems have been used for various important mapping projects, including:
 - The joint utility mapping project in Burnaby, British Columbia.
 - The Metrocom tax and public works mapping project in Houston.
 - ARAMCO, the Saudi Arabia base mapping project with Wild/Heerbrugg of Switzerland.
- Synercom also provides two design, drafting, and engineering DEC based systems for the metal building and marine/land construction industries. These systems include:
 - AUTO/STEEL, introduced in 1970, provides engineering and drawing functions for pre-engineered metal building operations. It runs on DEC PDP-11/70 and VAX CPUs.
 - MARCS, introduced in 1971, is a marine and offshore construction design package.
- A representative list of vendors and hardware components used by Synercom follows:
 - Central processors: DEC PDP-11/70, ST 700; DEC PDP-11/44, ST 440; and DEC VAX-11/750, ST V 750.
 - Graphics workstations: Synercom Technology.
 - Plotters: CalComp, Versatec, and WILD.
 - Graphic display devices: Tektronix, Lexidata.

SYNERCOM TECHNOLOGY, INC.

- Digitizers: Talos.
 - Stereoplotter interfaces: WILD.
 - Tape drives: DEC, Kennedy.
 - Disk drives: CDC, DEC, Winchester.
 - Line printers: Data Printer.
- In the fourth quarter of 1982 Synercom, working with DEC, announced the availability of DEC's EPIC Series of Processors (ESP) and configurations.
 - Synercom will work with DEC to offer clients ESP DEC hardware for all critical components including the central processor, disk, printer, console, and tape drive.
 - Synercom believes the ESP package option will offer the user better price performance.

INDUSTRY MARKETS

- Synercom's fiscal 1982 revenue is derived from the following industry sectors:

Utilities	30%
Pipeline/petroleum	10
Federal government	10
State and local government	30
Engineering/consulting firms	<u>20</u>
	100%

GEOGRAPHIC MARKETS

- Seventy percent of Synercom's revenue is derived from the U.S. and 30% from international sources.
- Synercom has offices in Atlanta, Cleveland, and San Francisco.

COMPUTER HARDWARE AND SOFTWARE

- Synercom has over 90 systems installed for product development including the following:
 - DEC PDP-11/70s, ST 700, operating under RSX-11/M.
 - DEC PDP-11/44s, ST 440, operating under RSX-11/M.
 - DEC VAX-11/750s, ST V750, operating under VAX/VMS.



COMPANY PROFILE

SYSCON CORPORATION

1000 Thomas Jefferson Street, N.W.
Washington, D.C. 20007
(202) 342-4000

Nils Ericson, President
Wholly Owned Subsidiary of Harnischfeger
Industries, Inc.
Total Employees: 1,700*
Total Revenue, Fiscal Year End
10/31/91: \$150 million*

*INPUT estimate

The Company

SYSCON Corporation, founded in 1966, primarily provides systems development, systems integration, and systems operations services for the U.S. Department of Defense (DoD), government agencies, and commercial clients.

- SYSCON operated as a public corporation until December 30, 1986, when it was acquired by Harnischfeger Industries for \$92.1 million.
- Harnischfeger Industries, headquartered in Milwaukee (WI), is a holding company for subsidiaries involved in papermaking machinery manufacturing, service mining and material handling equipment manufacturing, and systems integration services. Total revenues for 1991 reached nearly \$1.6 billion.
- SYSCON now operates as a wholly owned subsidiary within Harnischfeger Industries' Systems Group. The group, which generated sales of \$224.3 million and operating profit of \$8.3 million in 1991, also includes Harnischfeger Engineers, Inc., a material handling systems integrator and engineering firm.

Although SYSCON's services are primarily provided to the DoD, the company has been broadening its business base during the last several years and has increased emphasis on systems integration, the non-defense federal sector, and foreign markets.

- SYSCON has established an office in Saudi Arabia and initiated marketing activities in Taiwan and Korea.
- In the Pacific Rim, SYSCON has established strategic alliances with several major regional corporations, part of an effort to market defense systems expertise to foreign governments in the wake of diminishing U.S. military spending.

- During 1991, SYSCON achieved a more than 45% contract win rate, in spite of a difficult business environment.

Major competitors include IBM, GE, Unisys, Martin Marietta, Computer Sciences Corporation, PRC, and various smaller companies.

Key Products and Services

INPUT estimates that approximately 90% SYSCON's revenue is derived from information services. Approximately 45% of information services revenue is derived from professional services, (systems development), 30% from systems operations, 20% from systems integration, and the remainder from software products and turnkey systems.

- SYSCON's non-information services includes engineering and consulting services for electronic and avionic equipment.

SYSCON categorizes its services into three business segments: System Development, System Integration, and System Services.

System Development:

System development activities identified by SYSCON include systems engineering, computer systems, and training systems.

- SYSCON's engineers conduct functional and testability analyses, configuration audits, and verification and validation services.
- SYSCON develops software systems for military, government, and commercial customers. Areas of expertise include the integration of hardware and software and development of communications software, real-time software, command and control systems, and on-line data base management systems.
- For the DoD, SYSCON is involved in the development of training software, including stimulation/simulation systems, computer-managed instruction systems, and gaming computers.

Systems engineering project examples include the following:

- During 1991, SYSCON won the largest contract in the history of Harnischfeger Industries--a \$154 million, five-year contract to test and evaluate the U.S. Navy's AEGIS defense system.
- Designing and developing intermediate test sets and evaluating the design for the testability of the U.S. NAVSTAR Global Positioning System (GPS)

- Conducting functional and testability analyses, configuration audits, and verification and validation for the Secure Voice Interoperability Systems, which is being developed under the U.S. Navy Fleet Communications Engineering support contract
- Acting as systems development manager for the Modern Aids to Planning Program, which provides the warfighting Commanders in Chief with computer suites and models for campaign planning
- Developing models that provide a range of gaming, simulation, and analytical solutions to the defense community, including models such as STARRs, MIMIC, and MAGI
- Providing systems support for the Joint Warfare Center
- Acting as systems integrator for the U.S. Marine Corps Warfare Assessment Center
- Developing and integrating the Joint Chiefs of Staff Auto Force Generator, a rules-based force deployment model

Computer systems project examples include the following:

- Providing broad design, evaluation, and program guidance to the U.S. Naval Ocean Systems Center on the application of Ada to the Link 11 command and control processor
- Developing the communications and signal processing for the Underwater Surveillance System for the U.S. Navy
- Supporting the U.S. Department of Labor in the design, installation, and integration of a country-wide communications system, including developing new local-area networks (LANs) and implementing extensions to existing LANs
- Providing test and evaluation and software engineering support as a subcontractor to Sprint International
- Acting as software engineering support contractor to the Air Force Electronics Systems Division for the acquisition of an automated, digital command and control system
- Developing requirements for the integration of an upgraded international communications billing system, local telecommunications capability, and a U.S. intelligence data base for the Drug Enforcement Agency

Training systems projects include the following:

- Development of the NAVTAG (Naval Tactical Gaming Systems) used to train Naval Surface Warfare Officers in tactical decision making
- Development of the ULQ-13 controlled threat simulator for the U.S. Navy Fleet Electronic Warfare Support Group
- Development of the Automated Instructional Management System (AIMS) for the U.S. Army and management of AIMS facilities at training sites across the U.S. AIMS tracks personnel through the entire training process.
- Providing broad-based computer training, interactive training, and computer-managed instruction support to the U.S. Army, Air Force, and Navy, as well as Disney-Universal Studios, Hyatt Corporation, NBC, TKO Production, and NCR

System Integration:

SYSCON supports the DoD and other federal government agencies as a subcontractor and prime contractor.

Project examples include the following:

- Working with Harnischfeger Engineers to integrate one of North America's largest automated material handling systems--a central distribution facility--for Canadian Tire Corporation
- With Martin Marietta, designing, integrating, and testing software for joint programs
- With TRW, developing the U.S. Army's Computer- Logistics Support (CALs) system
- Supporting Jet Propulsion Laboratories (JPL) with reliability and specialty engineering services for spacecraft, civil, and defense programs
- Designing an input/output processor and software with the National Systems and Research Company
- With Hughes Corporation, developing the Advanced Combat Direction System for the U.S. Navy
- Providing an IBM-based personnel system to the U.S. Navy

- Developing software for SURTASS, the Navy's mobile undersea surveillance system
- Supporting a range of NASA projects, including systems engineering, applications and systems programming, and operating services for NASA Ames Research Center
- Developing and providing total data services for the Air Force's weapons documentation system, ATOS
- Providing operational support for the Department of Education minicomputer and LAN facilities, including functional integration and computer hardware and software acquisition, installation, and maintenance
- Supporting the DoD in planning, scheduling, financial tracking, and reviewing operations and software systems, including the Naval Military Personnel System
- Providing engineering, maintenance, and logistic support for the Navy's shore, sea, and submarine-based satellite communications facilities

SYSCON also markets NTDS/PLUS™ Naval Tactical Data Systems (NTDS) laboratory equipment to developers of NTDS tactical software. NTDS/Plus includes a programmable NTDS I/O multiplexer (PIPE) and a microcomputer NTDS interface board (MIL-I/O).

SYSCON has also developed the following software for various federal government agencies:

- The Computer Assisted Maintenance Management System (CAMMST™) provides logs and records management, tracks discrepancies, and generates work orders and reports. CAMMS is used for the maintenance of the Navy's T2C aircraft.
- SKETCHER™ is an Ada software design tool that allows on-line interactive generation of object-oriented design diagrams (OODDs) which represent high-level Ada entities and the Program Design Language that corresponds to the OODDs drawn.
- 217 PREDICT® is a software package that SYSCON has marketed since 1980 in various forms. 217 PREDICT aids the Armed Forces and government contractors in predicting the reliability of electronic and mechanical systems.

- 756 PREDICT™ is software that provides system reliability predictions in compliance with system-level modeling requirements of MIL-STD 756.

System Services:

SYSCON provides systems operations services to various government and commercial clients.

Projects include:

- Managing the environmental test facility for the NASA Ames Research Center, providing applications programming and operational services for the Center's simulation laboratory
- Managing the Naval Underwater Systems Center test facility, testing, evaluating, and certifying command and control software on board the U.S. Navy's attack submarines
- Providing facility maintenance, computer operations, and logistics support for the U.S. Underwater Systems Center Land Based Integrated Test Sites facility in Newport (RI)
- Supporting the TRIDENT Command and Control System Maintenance Activity in the daily operations of the TRIDENT Land-Based Evaluation Facility

SYSCON currently manages five of its own major computer centers that support SYSCON's engineering, design, and software development activities and utility processing for the company's commercial clients.

SYSCON also markets the following products to federal and local government, as well as to commercial markets, as follows:

- VERSATERM® is a microcomputer-based, hand-held unit used by utility companies to automate meter reading. Information is entered into the unit for storage and later transferred to a computerized billing system using an IBM PC.
- ROUTE MANAGER™ is a software package for utility companies that provides meter reading management reports, data definition, and route splitting capabilities.
- The Checkweighing System (QCT-1000™) is a microcomputer-based quality control system for checking that the quantity of product inserted into a container measures within predetermined limits.

Industry Markets

INPUT estimates that approximately 65% of SYSCON's fiscal 1991 revenue was derived from defense-related programs for the federal government. The remainder was derived from the non-defense federal sector and commercial customers.

Geographic Markets

INPUT estimates that virtually all of SYSCON's revenue is derived from the U.S.

SYSCON maintains numerous offices across the U.S. and also has an office in Saudi Arabia.

COMPANY PROFILE

SYSCON CORPORATION

1000 Thomas Jefferson Street, N.W.
Washington, D.C. 20007
(202) 342-4000

Jose J. Yglesias, Chairman and CEO
Nils Ericson, President and COO
Wholly Owned Subsidiary of Harnischfeger
Industries, Inc.
Total Employees: 1,778
Total Revenue, Fiscal Year End
10/31/88: \$149,776,000

The Company

SYSCON Corporation, founded in 1966, primarily provides system development, systems integration, and system services for the U.S. Department of Defense (DoD), government agencies, and commercial clients.

SYSCON operated as a public corporation until December 30, 1986 when it was acquired by Harnischfeger Industries for \$92.1 million. SYSCON now operates as a wholly owned subsidiary of Harnischfeger Industries.

SYSCON's fiscal 1988 revenue reached nearly \$149.8 million, a 10% increase over annualized 1987 revenues. In the five-year summary that follows, SYSCON's fiscal 1988 revenue reflects a full year of operations as compared to revenue of \$113.2 million for the 10-month period reported in 1987. The short reporting period in 1987 was due to the acquisition by Harnischfeger Industries and a change from a November 30 to an October 31 year-end.

**SYSCON CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands)**

ITEM	FISCAL YEAR				
	10/88	10/87(a)	11/86	11/85	11/84
Revenue	\$149,776	\$113,171	\$135,449	\$117,286	\$104,040
• Percent increase from previous year	*	*	15%	13%	20%
Income before taxes	\$11,134	\$9,675	\$10,451	\$8,554	\$7,512
• Percent increase from previous year	*	*	22%	14%	19%
Net income	\$7,292	\$5,048	\$5,363	\$4,428	\$4,065
• Percent increase from previous year	*	*	21%	9%	16%

* Percent change not meaningful.

(a) Reflects results only for the ten-month period ending October 31, 1987.

Revenue for the nine months ending July 31, 1989 was \$107 million, a 2% decrease from \$109 million for the same period in 1988. Net income decreased 14%, from \$7 million to \$6 million.

Major competitors include IBM, GE, Unisys, Martin Marietta, Computer Sciences Corporation, Planning Research Corporation, and various smaller companies.

Key Products and Services

INPUT estimates that approximately \$135 million (90%) of SYSCON's total fiscal 1988 revenue was derived from information services. Approximately 70% of information services revenue was derived from professional services (systems development and facilities management), 20% from systems integration, and the remaining 10% from software products, turnkey systems, and processing services.

- SYSCON derived the remaining 10% of total fiscal 1988 revenue from non-information services, including engineering and consulting services for electronic and avionic equipment.
- Over 60% of SYSCON's revenues in each of the past three years were generated from cost-plus-fee contracts.

SYSCON currently reports its revenue in three business segments: Systems Development, Systems Integration, and Systems Services.

A five-year summary of source of revenue by business segment follows:

**SYSCON CORPORATION
FIVE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

BUSINESS SEGMENT	FISCAL YEAR				
	10/88	10/87(a)	11/86	11/85	11/84
Systems Development	\$30.0	\$22.0	\$27.0	\$22.0	\$21.0
Systems Integration	30.0	21.0	27.0	19.0	14.0
Systems Services	90.0	70.0	81.0	76.0	69.0
TOTAL (b)	\$150.0	\$113.0	\$135.0	\$117.0	\$104.0

(a) Includes results for the ten months ending October 31, 1987.

(b) Revenue amounts have been rounded to the nearest million.

Systems Development:

SYSCON's major business thrust is the development of complex systems for the Armed Forces (DoD). As a software engineering firm, SYSCON provides computer programs used by the military in their training, logistics, business management, and mission critical systems. During 1988, there were 71 contracts in this business area, compared to 64 for the ten months ending October 31, 1987. Current Systems Development projects include the following:

- SYSCON has been selected by the DoD to develop, in Ada, a major subset of the U.S. Navy's Command and Control Processor (C²P). The C²P is a complex digital tactical link communications interface for AEGIS Combat System ships.
- SYSCON is developing major upgrades to several undersea surveillance programs, including improvements to communications and data processing for the U.S. Navy. The systems are being written in Ada and hosted on commercial hardware.
- SYSCON is also continuing its support of the Surveillance Towed Array Sensor System (SURTASS) for the Navy. Its

work in software development for SURTASS upgrades will provide the Fleet with improved display and acoustic data processing capabilities.

- SYSCON is involved with the planning, design, development, and post-exercise analyses associated with test and measurement requirements of Anti-Submarine Warfare (ASW) underwater ranges and their systems.
- SYSCON is continuing its efforts on the Joint Interoperability Evaluation System in support of the Joint Tactical Command, Control, and Communications Agency. SYSCON's primary thrust is developing advanced software methodologies, in Ada, to solve the complexities of Tactical Digital Information Link communications processing.
- SYSCON is involved, as a subcontractor to Martin Marietta Corporation, with helping to perform design and development of C³ Software Development and Support, a major upgrade of the NORAD Cheyenne Mountain Complex Aerospace Defense System for the Air Force Space Command.
- SYSCON has developed various courseware and video and interactive videodisc training tools for the DoD. Currently SYSCON is developing Level III interactive videodisc courseware for the U.S. Navy and Air Force.

Systems Integration:

SYSCON supports the military and other federal government agencies in the integration of commercial off-the-shelf hardware and software to meet systems requirements. During 1988, there were 11 contracts in this business area, compared to 13 for the ten months ending October 31, 1987. Project examples include the following:

- During 1988, SYSCON completed the design, development, testing, and system integration of the Logistics Applications of Automated Marking and Reading Symbols (LOGMARS) for the U.S. Army. LOGMARS provides the Army with automated inventory management at the Army tactical unit level.
- During 1988, SYSCON was awarded a contract to provide an office automation computer network for the Department of Education. The contract provides operational support, technical and integration support, systems programming support, and maintenance of the office automation hardware, software, and local-area network facilities.

- SYSCON is currently installing enhancements to the Automated Technical Order Systems (ATOS) for the U.S. Air Force. ATOS, developed by SYSCON in 1983 as a pilot program, integrates commercial off-the-shelf products, using text generation, computer-aided design, and phototypesetting, to reduce the cost and increase the speed of changes to Air Force Technical Orders.
- SYSCON has been working with the Naval Military Personnel Command since 1985 to integrate its Naval Military Personnel Distribution System (NMPDS). NMPDS is a network of IBM processor-based systems designed to manage the assignment of Officer and Enlisted personnel.
- Simulations and computer models developed by SYSCON include the following:
 - NAVTAG (Naval Tactical Gaming Systems) is an automated warfare gaming system used to train Naval Surface Warfare Officers in tactical decision making. NAVTAG was migrated to the IBM RT during 1988.
 - PORTS (Portable Operational Readiness Training System) is a standalone system that provides generic acoustic analysis training in a variety of operational environments.
 - TASWIT (Tactical Anti-Submarine Warfare Interim Trainer) is a distributed training system that expands team training capabilities in the ASW Combat Information Center.

Systems Services:

This unit continues to be a major segment of SYSCON's business base. SYSCON performs a range of engineering and management services to assist clients responsible for projects that field complex military and space systems. During 1988, this unit worked on 240 contracts, compared to 233 for the ten months ending October 31, 1987.

- SYSCON is engaged in the Modern Aids to Planning Program (MAPP), an initiative of the Joint Staff. The goal of MAPP is to acquire state-of-the-art hardware and software and to employ modern wargaming, simulation, and analysis methodologies.
- Continuing 20 years of support to the AEGIS Program, SYSCON will perform test and evaluation of the AEGIS

Combat System computer programs under a five-year contract with the Naval Surface Weapons Center in Dahlgren (VA).

- SYSCON Services, Inc., a wholly owned subsidiary, is a 70% partner in SYRE, a joint venture with RMS Technologies Inc. SYRE provides facilities management and information services to NASA Ames Research Center flight simulation facilities. SYRE had revenue of approximately \$6.2 million and income of \$318,000 for fiscal 1988.

SYSCON also markets the following products to federal and local government, as well as to commercial markets, as follows:

- VERSATERM[®] is a microcomputer-based, hand-held unit used by utility companies to automate meter reading. Information is entered into the unit for storage and later transferred to a computerized billing system using an IBM PC.
- ROUTE MANAGER[™] is a software package for utility companies that provides meter reading management reports, data definition, and route splitting capabilities.
- The Checkweighing System (QCT-1000[™]) is a microcomputer-based quality control system for checking that the quantity of product inserted into a container measures within predetermined limits. Clients include Avon Products, Miles Pharmaceuticals (a division of Miles Laboratories), Pharmasol Corporation, Chesebrough-Ponds, and Procter & Gamble.
- SYSCON provides the following software to various federal government agencies:
 - The Computer Assisted Maintenance Management System (CAMMS[™]) provides logs and records management, tracks discrepancies, and generates work orders and reports. CAMMS is used for the maintenance of the Navy's T2C aircraft.
 - SKETCHER[™] is an Ada software design tool that allows on-line interactive generation of object-oriented design diagrams (OODDs) which represent high-level Ada entities and the Program Design Language that corresponds to the OODDs drawn.
 - 217 PREDICT[®] is a software package that SYSCON has marketed since 1980 in various forms. 217 PREDICT aids the Armed Forces and government contractors in predicting the reliability of electronic and mechanical systems.

- 756 PREDICT™ is software that provides system reliability predictions in compliance with system-level modeling requirements of MIL-STD 756.
- SYSCON also markets NTDS/Plus™ Naval Tactical Data Systems (NTDS) laboratory equipment to developers of NTDS tactical software. NTDS/Plus includes a programmable NTDS I/O multiplexer (PIPE) and a microcomputer NTDS interface board (MIL 110).

Industry Markets

Approximately 90% of SYSCON's revenue in each of the past three years resulted from contracts or subcontracts with the U.S. Department of Defense. The remaining 10% was derived from NASA and other federal agencies.

Geographic Markets

One hundred percent of SYSCON's revenue is derived from the U.S.

SYSCON maintains offices in Camarillo, Moffet Field, Montrose, Oxnard, San Diego, and Vallejo (CA); New London (CT); Ft. Walton Beach, Orlando, Pensacola, and Tampa (FL); Metairie (LA); Bath (ME); Columbia and Lexington Park (MD); Lexington (MA); Gautier (MS); Mt. Laurel (NJ); Rome (NY); Havelock (NC); Newport (RI); Charleston (SC); Oak Ridge (TN); Arlington, Dahlgren, Virginia Beach, Wallops Island, and Williamsburg (VA); Milwaukee (WI); and Washington, D.C.

Computer Hardware and Software

Equipment is maintained in data centers in the following locations:

- Washington, D.C.:
 - HP 3000-68, MPE
 - HP 3000-37, MPE
 - DEC VAX-11/780, VMS
 - DEC VAX-11/785, VMS
 - DEC VAX-8650, VMS
 - DEC VAX-8810, VMS
 - DEC MicroVAX II, VMS

- Newport (RI):
 - HP 3000-48, MPE
 - DEC VAX/11/750, VMS
 - DEC VAX-11/780, VMS
 - DEC PDP-11/23, RSTS/E and RSX
- San Diego (CA):
 - HP 3000-37, MPE
 - DEC VAX-11/780, VMS
 - DEC VAX-11/785, VMS
 - DEC MicroVAX 3300, VMS
 - Alliant VFX/8-8, Concentrix

Microcomputers from a variety of vendors are installed at all SYSCON office locations.

COMPANY PROFILE

SYSCON CORPORATION
1000 Thomas Jefferson Street, N.W.
Washington, DC 20007
(202) 342-4000

Jose J. Yglesias, Chairman and CEO
Edwin E. Tritch, President and COO
Public Corporation, OTC
Total Employees: 1,580
Total Revenue, Fiscal Year End
11/30/85: \$117,286,000
Computer Services Revenue:
\$88,000,000*

THE COMPANY

- SYSCON Corporation, incorporated in 1966 under the name Systems Consultants, Inc., primarily provides engineering consulting and professional services, including facilities management, to the U.S. Department of Defense. The company also markets processing services, software products, turnkey systems, and hardware products.
- Fiscal 1985 revenue increased 13% to \$117.3 million from \$104 million in 1984. Net income increased 9% to \$4.4 million from \$4.1 million in the same period. A five-year financial summary follows:

SYSCON CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	11/85	11/84	11/83	11/82	11/81
Revenue	\$ 117,286	\$ 104,040	\$ 87,015	\$ 71,399	\$ 61,120
Percent increase from previous year	13%	20%	22%	17%	17%
Income before taxes	\$ 8,554	\$ 7,512	\$ 6,325	\$ 4,873	\$ 4,465
Percent increase from previous year	14%	19%	30%	9%	31%
Net income	\$ 4,428	\$ 4,065	\$ 3,495	\$ 2,764	\$ 2,411
Percent increase from previous year	9%	16%	26%	15%	30%
Earnings per share (a)	\$ 0.95	\$ 0.87	\$ 0.81	\$ 0.68	\$ 0.70
Percent increase (decrease) from previous year	9%	7%	19%	(3%)	32%

(a) Restated to reflect a 3-for-2 stock split effective November 30, 1985.

*INPUT estimate

SYSCON CORPORATION

- Research and development expenditures were \$611,000, \$601,000, and \$543,000 for fiscal 1985, 1984, and 1983, respectively.
- Revenue for the six months ended May 31, 1986 was \$63.1 million, a 15.5% increase over \$54.6 million for the same period in 1985. Net income increased to \$2.4 million from \$2.1 million in 1985.
- In January 1983 SYSCON announced the formation of SYRE, a joint venture company headquartered in Sunnyvale (CA), which is 70% owned by SYSCON and 30% by Republic Management Systems & Computer Services Inc. of Trevose (PA). SYRE provides professional services and facilities management support services for flight simulation facilities at NASA's Ames Research Center in Mountain View (CA) under a three-year \$15.8 million contract.
 - SYRE fiscal 1985 revenue reached \$7.1 million, a 15% increase over revenue of \$6.2 million in 1984. Net income was \$329,000, an increase of 25% over net income of \$263,000 in 1984.
- Major competitors include IBM, Martin Marietta Corporation, Sperry Corporation, Computer Sciences Corporation, Raytheon Company, System Development Corporation (a subsidiary of Burroughs Corporation), and Planning Research Corporation.

KEY PRODUCTS AND SERVICES

- INPUT estimates that approximately 75% of SYSCON's total fiscal 1985 revenue was derived from computer services. Approximately 90% of computer services revenue was derived from professional services (11% facilities management) and the remaining 10% from software products, turnkey systems, and timesharing services.
 - SYSCON derived the remaining 25% of total fiscal 1985 revenue from noncomputer services. The majority of noncomputer services revenue was derived from engineering and consulting services for electronic and avionics equipment provided by SYSCON's Technical Services and Systems Engineering business segments. The balance is from hardware sales.
- Following is a four-year summary of SYSCON's revenue by business segment (\$ millions):

SYSCON CORPORATION

ITEM	FISCAL YEAR			
	11/85	11/84	11/83	11/82
Technical Services	\$ 38.1	\$ 37.3	\$32.6	\$28.8
Computer Systems	38.6	37.7	30.3	26.5
Systems Engineering	25.3	19.2	15.9	12.9
Facilities Management	10.3	5.8	4.3	1.8
Hardware/Software Products	5.0	4.0	3.9	1.4
Total Revenue	\$ 117.3	\$ 104.0	\$87.0	\$71.4

- Through its Computer Systems business segment, SYSCON develops and implements systems and applications software, provides data base management systems, develops customized turnkey systems, and performs hardware and software requirements analysis. SYSCON also designs and develops aerospace software in support of military projects including target surveillance, airborne and antisubmarine fire control, anti-war warfare simulation and evaluation, and advanced radar systems.
- Active contract examples include the following:
 - SYSCON designed and delivered prototypes of Naval Tactical Game (NAVTAG) and in 1985 was awarded a production contract by the Navy to produce 240 NAVTAG wargaming turnkey systems for shipboard training of surface warfare officers over the next five years.
 - Since 1975 SYSCON has designed, developed, installed, operated, and maintained training management turnkey systems used by the U.S. Army and Navy. System features include personnel records, interactive testing and grading, class scheduling, inventory control, training schedule design, and a data base that will maintain information on 35,000 students.
 - SYSCON provides independent verification and validation of the U.S. Air Force Ada compiler and support software, and is providing independent test and evaluation of the Ada Language System for the U.S. Navy. Ada software tools in support of the World Wide Military Command and Control System (WWMCCS) Information System (WIS) currently being developed by SYSCON include a Graphics Ada Designer and an Emulation of Machine Arithmetic.
- SYSCON uses COMPARE, its internally developed analytical queuing model, to identify computer system constraints and the impact of changes to system hardware, software, or utilization.

SYSCON CORPORATION

- Professional services facilities management contracts, under which SYSCON provides staffing and management of client-owned computer and test facilities, include the following:
 - SYSCON has contracts for management of a Navy land-based evaluation facility for systems integration, test, and certification of submarine command and control software, and of a Navy computer facility for tracking manpower assignments and records.
 - Since 1975 SYSCON has been responsible for the development and operation of Aviation Training Support Systems (ATSS) used for scheduling and training military personnel. Under a contract signed with the Naval Training Equipment Center in 1985, SYSCON will provide support services and maintenance for 18 sites of ATSS training management systems nationwide.
 - SYSCON Services, Inc., a wholly owned subsidiary, participates in a joint venture to provide facilities management and computer services to NASA Ames Research Center flight simulation facilities.
- Through its Technical Services business segment SYSCON provides professional services related to computer systems procurement and operation including configuration management, logistics support, equipment installation and certification, and technical audits. SYSCON also provides financial management services for military programs and software products used to predict electronic equipment reliability. Primary customers are the U.S. Navy, Air Force, and Army.
 - Representative active projects include the following:
 - SYSCON provides a broad range of systems engineering, technical, and management support to various Naval Sea Systems Command programs and project offices under a contract with the Navy.
 - SYSCON has contracted with the Navy to provide engineering, maintenance, and logistics support for the Navy's shore, sea, and submarine-based satellite communications facilities.
 - The company has a contract with the Fleet Analysis Center to collect and analyze shipboard fire control system test data for performance evaluations.
 - SYSCON has developed the following proprietary products used to predict electronic equipment reliability that are also available as software packages and network applications from processing services vendors.
 - 217 Predict/SYSREL predicts failure of individual electronic components or a series of components.

SYSCON CORPORATION

- Sneak Circuit Analysis analyzes logic faults in electronic circuits.
 - FMECA analyzes circuit failures.
- Services provided through SYSCON's Systems Engineering business segment include computer program development and verification. Simulation and analysis studies are conducted to determine the technical, economic, and performance feasibility of proposed systems.
 - Examples of active contracts include the following:
 - SYSCON has provided services relating to AEGIS, an advanced shipboard air defense system, for the U.S. Navy since 1975. Services include analysis of system adequacy, shipboard installation management, test and evaluation, training development, systems software validation, and development of a financial management system.
 - SYSCON is providing independent verification and validation of Financial Management System software, site surveys of research and development activities, and management planning for the U.S. Navy Supply Command.
 - In 1985, SYSCON won a contract for \$30 million to upgrade the Naval Military Personnel Distribution System (NMPDS). SYSCON will continue providing the software development and facilities management services it provided on NMPDS in past awards.
 - Under a 1985 Modern Aids for Planning Program contract, SYSCON will develop a software architecture to consolidate and integrate off-the-shelf planning aids into a situation planning system for the Armed Services.
- As part of its hardware/software business segment, SYSCON provides turnkey systems, software products, and processing services to the federal and local governments, as well as commercial markets. Hardware/software products currently marketed include the following:
 - SYSCON's municipal information system consists of integrated system modules including Financial Management System (FMS), Accounts Receivable Module (ARM), Municipal Payroll/Personnel System (MPPS), and Utility Billing Information System (UBIS). The system is based on Prime 50 Series minicomputers and is sold as a turnkey system or as separate software packages.
 - The turnkey system, which ranges in price from \$100,000 to \$250,000, offers a range of applications including utility billing, financial management, accounts receivable, fixed assets management, and payroll/personnel.

- Applications sold as separate software packages range in price from \$10,000 to \$25,000 each.
- The On-Line Billing Information System (OBIS) provides on-line billing of water usage and refuse collection for small municipalities. OBIS operates on Hewlett-Packard 3000; Prime 50 and 750 series; DEC 11/23, 11/40, and 11/70; and SYSCON T-Series computers.
 - OBIS is available as a software package and costs \$20,000.
 - The turnkey version of OBIS, running on DEC PDP-11/23 computers, ranges in price from \$32,500 to \$60,000.
 - OBIS is also available on a processing basis.
- COMTAS is a tax collection and revenue monitoring system offered on a processing basis only. SYSCON hosts the system on the Hewlett-Packard 3000 and Prime Series 50 computers.
- Meter Reader/VERSATERM® is a microcomputer-based hand-held unit used by utility companies to automate meter reading. Information is entered into the unit for storage and later transferred to a computerized billing system using an IBM PC.
- ROUTE MANAGER™ is a software package for utility companies that provides meter reading management reports, data definition, and route splitting capability.
- Checkweighing System (QCT-1000™) is a microcomputer-based quality control system used to check that the quantity of product inserted into a container measures within predetermined limits.
 - Customers of QCT-1000 include Avon Products, Inc., Miles Pharmaceuticals (a division of Miles Laboratories, Inc.), Pharmasol Corporation, Chesebrough-Ponds, and Procter and Gamble.
- In 1982 SYSCON began delivery of its 16-bit DEC PDP-11/23-based T-Series computers (T100/200/300). T-Series are general-purpose computers sold separately or in conjunction with various SYSCON software packages and services. With 50 installations, hardware prices range from \$17,000 to \$40,000.
 - SYSCON markets NetWorkLink™ which offers high-speed communications capabilities between its own T-Series computers as well as DEC PDP and VAX Series computers.
 - SYSNET, a companion networking package developed by SYSCON, allows point-to-point networking capability. SYSNET accelerates data transfer when used in conjunction with NetWorkLink.

SYSCON CORPORATION

- SYSCON markets NTDS/Plus^{T.M.}, Naval Tactical Data Systems (NTDS) laboratory equipment, to developers of NTDS tactical software. NTDS/Plus includes a Programmable NTDS I/O Multiplexer (PIPE) and a Microcomputer NTDS interface board (MIL 110).
- SYSCON provides the following software to various federal government agencies:
 - The Computer Assisted Maintenance Management System (CAMMS^{T.M.}) provides logs and records management, tracks discrepancies, and generates work orders and reports. This software package operates on SYSCON computers and is used for the maintenance of the Navy's T2C aircraft.
 - SKETCHER^{T.M.} is an Ada software design tool that allows on-line interactive generation of Object-Oriented Design Diagrams (OODD) which represent high-level Ada entities and the Program Design Language that corresponds to the OODDs drawn.
 - 217 PREDICT[®] is a software package SYSCON has marketed since 1980 in various forms. 217 PREDICT aids the Armed Forces and government contractors in predicting the reliability of electronic and mechanical systems.
 - 756 PREDICT^{T.M.} is software that provides system reliability predictions in compliance with system level modeling requirements of MIL-STD-756.

INDUSTRY MARKETS

- Approximately 90% of fiscal 1985 revenue was derived from contracts and subcontracts with the Department of Defense (80% with the U.S. Navy). The remaining 10% was derived from other federal government agencies, municipal governments, and commercial companies.

GEOGRAPHIC MARKETS

- All of SYSCON's revenue is derived from the U.S.
- SYSCON maintains branch offices in Encino, Montrose, Oxnard, Sacramento, San Diego, Sunnyvale and Vallejo (CA); New London (CT); Colorado Springs; Orlando (FL); New Orleans; Bath (ME); California and Columbia (MD); Lexington (MA); Gautier (MS); Mt. Laurel (NJ); Albuquerque (NM); Syracuse (NY); Dayton (OH); Newport (RI); Charleston (SC); Arlington, Dahlgreen, King George, Norfolk, Virginia Beach, and Williamsburg (VA); and Washington D.C.

COMPUTER HARDWARE AND SOFTWARE

- Equipment is maintained in data centers in the following locations:
 - Washington, D.C.:
 - HP 3000-68, MPE.
 - HP 3000-37, MPE.
 - DEC VAX-11/780, VMS.
 - DEC VAX-11/785, VMS.
 - DEC VAX-8600, VMS.
 - DEC PDP-11/73, RSTS/E and RSX.
 - IBM 4341-M12, MVS.
 - Wang VS-100.
 - Newport (RI):
 - HP 3000-48, MPE.
 - HP 3000-37, MPE.
 - HP 9020.
 - DEC VAX-11/780, VMS.
 - DEC PDP-11/73, RSTS/E and RSX.
 - Prime 2250, PRIMOS.
 - San Diego (CA):
 - HP 3000-111, MPE.
 - DEC VAX-11/780, VMS.
 - DEC VAX-11/785, VMS.
 - DEC PDP-11/73, RSTS/E.
 - Prime 750, PRIMOS.
 - Prime 2250, PRIMOS.
- Microcomputers from a variety of vendors are installed at all SYSCON office locations.

FINANCIAL UPDATE TO PROFILE DATED AUGUST 1983*

SYSCON CORPORATION
1000 Thomas Jefferson Street, N.W.
Washington, DC 20007
(202) 342-4000

Jose J. Yglesias, Chairman and CEO
Edwin E. Tritch, President and COO
Public Corporation, OTC
Total Employees: 1,500
Total Revenue, Fiscal Year End
11/30/84: \$104,030,000
Computer Services Revenue:
\$78,000,000**

SYSCON CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	11/84	11/83	11/82	11/81	11/80
Revenue	\$ 104,040	\$ 87,015	\$ 71,399	\$ 61,120	\$ 52,348
• Percent increase from previous year	20%	22%	17%	17%	18%
Income before taxes	\$ 7,512	\$ 6,325	\$ 4,873	\$ 4,465	\$ 3,421
• Percent increase from previous year	19%	30%	9%	31%	2%
Net income	\$ 4,065	\$ 3,495	\$ 2,764	\$ 2,411	\$ 1,848
• Percent increase from previous year	16%	26%	15%	30%	4%
Earnings per share	\$ 1.31	\$ 1.22	\$ 1.02	\$ 1.05	\$ 0.80
• Percent increase (decrease) from previous year	7%	20%	(3%)	31%	4%

SOURCE OF REVENUE

- INPUT estimates that approximately 75% (\$78 million) of Syscon's fiscal 1984 revenue was derived from computer services.
 - Over 90% of computer services revenue was derived from professional services (the majority from systems and applications software development and consulting and \$5.8 million from facilities management).
 - The remaining computer services revenue was derived from the sale of software products, turnkey systems, and timesharing services.

* Replaces Financial Update dated June 1984

** INPUT estimate

1 of 2
April 1985

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INPUT

SYSCON CORPORATION

- Of the noncomputer services revenue, the majority is from engineering and consulting services for electronic and avionic equipment provided by Syscon's Technical Services and Systems Engineering business segments. The balance is from hardware sales.
- The following is a four-year summary of Syscon's revenue by business segment (\$ millions):

ITEM \ FISCAL YEAR	11/84	11/83	11/82	11/81
Technical Services	\$ 37.3	\$32.6	\$28.8	\$26.6
Computer Systems	37.7	30.3	26.5	24.2
Systems Engineering	19.2	15.9	12.9	7.0
Facilities Management	5.8	4.3	1.8	2.7
Hardware/Software Products	4.0	3.9	1.4	0.6
Total Revenue	\$ 104.0	\$87.0	\$71.4	\$61.1

- Contracts with the Department of Defense represent approximately 95% of Syscon's revenue both historically and presently. Eighty percent of defense contracts or subcontracts are with the U.S. Navy. The remaining 5% of revenue is from state and municipal governments and commercial markets.

FINANCIAL UPDATE TO HIGHLIGHT DATED AUGUST 1983

SYSCON CORPORATION

1000 Thomas Jefferson Street, N.W.
Washington, DC 20007
(202) 342-4000

Jose J. Yglesias, President and CEO
Public Corporation, OTC
Total Employees: 1,450
Total Revenue, Fiscal Year End
11/30/83: \$87,015,000
Computer Services Revenue:
\$61,000,000*

SYSCON CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	11/83	11/82	11/81	11/80	11/79
Revenue	\$ 87,015	\$ 71,399	\$ 61,120	\$ 52,348	\$ 44,263
• Percent increase from previous year	22%	17%	17%	18%	16%
Income before taxes	\$ 6,325	\$ 4,873	\$ 4,465	\$ 3,421	\$ 3,359
• Percent increase from previous year	30%	9%	31%	2%	18%
Net income	\$ 3,495	\$ 2,764	\$ 2,411	\$ 1,848	\$ 1,782
• Percent increase from previous year	26%	15%	30%	4%	19%
Earnings per share	\$ 1.22	\$ 1.02	\$ 1.05	\$ 0.80	\$ 0.77
• Percent increase (decrease) from previous year	20%	(3%)	31%	4%	18%

SOURCE OF REVENUE

- INPUT estimates that approximately 70% (\$61 million) of Syscon's fiscal 1983 revenue was derived from computer services.
 - Over 90% of computer services revenue was derived from professional services (the majority from systems and applications software development and consulting and \$4.3 million from facilities management).
 - The remaining computer services revenue was derived from the sale of software products, turnkey systems, and timesharing services.

*INPUT estimate

SYSCON CORPORATION

- Of the noncomputer services revenue, the majority is from engineering and consulting services for electronic and avionic equipment provided by Syscon's Technical Services and Systems Engineering business segments. The balance is from hardware sales.
- The following is a four-year summary of Syscon's revenue by business segment (\$ millions):

ITEM \ FISCAL YEAR	11/83	11/82	11/81	11/80
Technical Services	\$ 32.6	\$ 28.8	\$ 26.6	\$ 24.2
Computer Systems	30.3	26.5	24.2	20.0
Systems Engineering	15.9	12.9	7.0	5.4
Facilities Management	4.3	1.8	2.7	2.5
Hardware/Software Products	3.9	1.4	0.6	0.2
Total Revenue	\$ 87.0	\$ 71.4	\$ 61.1	\$ 52.3

- Contracts with the Department of Defense represent approximately 95% of Syscon's revenue both historically and presently. Eighty percent of defense contracts or subcontracts are with the U.S. Navy. The remaining 5% is from municipal governments and commercial markets.

COMPANY HIGHLIGHT

SYSCON CORPORATION
1000 Thomas Jefferson Street, N.W.
Washington, D.C. 20007
(202) 342-4000

Jose J. Yglesias, President and CEO
Public Corporation, OTC
Total Employees: 1,280
Total Revenue, Fiscal Year End
11/30/82: \$71,399,000
Computer Services Revenue:
\$50,000,000*

THE COMPANY

- SYSCON Corporation, incorporated in 1966 under the name Systems Consultants, Inc., primarily provides engineering consulting and professional services, including facilities management, to the U.S. Department of Defense. The company also markets processing services, software products, turnkey systems, and hardware products.
- On November 17, 1981, SYSCON made an initial public offering of 500,000 shares of its common stock, of which 400,000 were sold by the company and 100,000 by stockholders. Proceeds to the company were approximately \$3.7 million.
 - In fiscal 1982 approximately \$1.7 million of the proceeds were used to finance the production of microprocessor-based products for commercial distribution.
- Fiscal 1982 revenue increased 17% to \$71.4 million from \$61.1 million in 1981. Net income increased 15% to \$2.8 million from \$2.4 million during the same period. A five-year financial summary follows:

*INPUT estimate

SYSCON CORPORATION

SYSCON CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

FISCAL YEAR ITEM	11/82	11/81	11/80	11/79	11/78
Revenue	\$ 71,399	\$ 61,120	\$ 52,348	\$ 44,263	\$ 38,293
• Percent increase from previous year	17%	17%	18%	16%	21%
Income before taxes	\$ 4,873	\$ 4,465	\$ 3,421	\$ 3,359	\$ 2,842
• Percent increase from previous year	9%	31%	2%	18%	28%
Net income	\$ 2,764	\$ 2,411	\$ 1,848	\$ 1,782	\$ 1,499
• Percent increase from previous year	15%	30%	4%	19%	25%
Earnings per share	\$ 1.02	\$ 1.05	\$ 0.80	\$ 0.77	\$ 0.65
• Percent increase (decrease) from previous year	(3%)	31%	4%	18%	25%

- Reduced growth rates in fiscal 1982 income before taxes and net income were primarily the result of a loss of \$500,000 recorded during fiscal 1982 for an arbitration ruling in which the company was found liable for damages.

- The decline in fiscal 1982 earnings per share was the result of both a \$0.07 per share loss due to the contract litigation and a 17% increase in shares outstanding over 1981.

- Net income did not increase significantly in fiscal 1980 due to development expenses for software packages for commercial clients and state and local governments.

- Research and development expenditures were \$548,000 in fiscal 1982 and \$462,000 in fiscal 1981.
- Revenue for the six months ended May 31, 1983, was \$39 million, a 16% increase over \$33.7 million for the same period in 1982. Net income increased 38% to \$1.5 million from \$1.1 million in 1982.
- On June 21, 1983, SYSCON made an offering of 700,000 shares of its common stock, 400,000 of which were sold by the company and 300,000 by stockholders. Proceeds to the company were approximately \$9 million.

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- In January 1983 the company announced the formation of SYRE, a joint venture company headquartered in Sunnyvale (CA), which is 70% owned by SYSCON and 30% by Republic Management Systems & Computer Services Inc. of Treviso (PA). SYRE will perform professional services and facilities management support services for flight simulation facilities at NASA's Ames Research Center in Mountain View (CA) under a three-year \$15.8 million contract.
- The company's number of employees increased from 1,280 in November 1982 to 1,380 in July 1983.
- SYSCON's primary professional services competition comes from Computer Sciences Corporation, Burroughs' System Development Corporation subsidiary, Planning Research Corporation, and Sperry Univac.

KEY PRODUCTS AND SERVICES

- Approximately 70% of SYSCON's total fiscal 1982 revenue was derived from computer services.
 - Sixty-nine percent was from professional services, of which 3% was facilities management.
 - Approximately 1% of revenue was derived in equal amounts from software products, turnkey systems, and processing services.
- Of the 30% of fiscal 1982 revenue derived from noncomputer services, approximately 29% was from SYSCON's Technical Services and Systems Engineering business segments, which provide engineering consulting and services involving the test and evaluation of electronic and avionic equipment. An estimated 1% of revenue was from hardware sales.
- A three-year summary of SYSCON's revenue by business segment follows:

FISCAL YEAR ITEM	11/82		11/81		11/80	
	Percent of Total	Revenue (\$ millions)	Percent of Total	Revenue (\$ millions)	Percent of Total	Revenue (\$ millions)
Technical Services	40%	\$28.8	44%	\$26.6	46%	\$24.2
Computer Systems	37	26.5	40	24.2	38	20.0
Systems Engineering	18	12.9	11	7.0	11	5.4
Facilities Management	3	1.8	4	2.7	5	2.5
Hardware/Software Products	<u>2</u> 100%	<u>1.4</u> \$71.4	<u>1</u> 100%	<u>0.6</u> \$61.1	<u>-</u> 100%	<u>0.2</u> \$52.3

- Growth in Systems Engineering segment revenue in fiscal 1982 represents an increase in work on both new projects and new aspects of existing projects for the Department of Defense.
- The increase in Hardware/Software Product segment revenue reflects the introduction of several products in fiscal 1982.
- SYSCON is currently providing services to government and commercial clients under approximately 200 contracts, 21 of which are in excess of \$1 million. The majority of contracts range in length from one to three years.
- Through its Technical Services segment SYSCON provides professional services related to computer systems procurement and operation including configuration management, logistics support, equipment installation and certification, and technical audits. SYSCON also provides financial management services for military programs and software products used to predict electronic equipment reliability. Primary customers are the U.S. Navy, Air Force, and Army.
- Recent projects include:
 - A contract with the Navy under which SYSCON provides a broad range of systems engineering, technical, and management support to various Naval Sea Systems Command programs and project offices.
 - A specific U.S. Navy contract under which the company performs technical services and program management support for the Saudi Naval Expansion Program (SNEP) for adaptation of shipboard combat systems to foreign navies. Services include configuration management, software verification and validation, and life-cycle cost development and tracking.
 - A contract with the Fleet Analysis Center to collect and analyze shipboard fire control system test data for performance evaluations.
- SYSCON has developed proprietary products used to predict electronic equipment reliability that are also available as software packages and network applications from processing services vendors. These include:
 - 217 Predict/SYSREL, which predicts failure of individual electronic components or a series of components.
 - Sneak Circuit Analysis, which analyzes logic faults in electronic circuits.
 - FMECA, which analyzes circuit failures.

- Through its Computer Systems business segment, SYSCON develops and implements systems and applications software, provides data base management systems, develops customized turnkey systems, and performs hardware and software requirements analysis. SYSCON also designs and develops aerospace software in support of military projects including target surveillance, airborne and antisubmarine fire control, anti-air warfare simulation and evaluation, and advanced radar systems.
- Contract examples include the following:
 - SYSCON designed and delivered 14 prototype Naval Tactical Game (NAVTAG) wargaming turnkey systems for shipboard training of surface warfare officers. After delivery of the systems, SYSCON was awarded a production contract by the Navy, with initial system deliveries scheduled for late 1983.
 - Since 1975 SYSCON has designed, developed, installed, operated, and maintained training management turnkey systems used by the U.S. Army and Navy. System features include personnel records, interactive testing and grading, class scheduling, inventory control, training schedule design, and a data base that will maintain information on 35,000 students.
 - SYSCON is studying the applicability of the Ada language for use by the Defense Communications Agency and is involved in verification and validation of U.S. Air Force Ada compiler and support software.
 - In July 1983 SYSCON was awarded a \$19 million contract by the Air Force Logistics Command to develop and install a computerized publishing system that integrates text generation, computer-aided design, and phototypesetting to automate the production and maintenance of Air Force technical manuals.
- SYSCON uses COMPARE, its internally developed analytical queuing model, to identify computer system restraints and the impact of changes to system hardware, software, or utilization.
- Services provided through SYSCON's Systems Engineering segment include computer program development and verification. Simulation and analysis studies are conducted to determine the technical, economic, and performance feasibility of proposed systems.
- SYSCON has provided services relating to AEGIS, an advanced shipboard air defense system, for the U.S. Navy since 1975. Services include analysis of system adequacy, shipboard installation management, test and evaluation, training development, systems software validation, and development of a financial management system.

SYSCON CORPORATION

- The company is delivering eight mobile electronic warfare signal stimulator customized turnkey systems under a contract with the Naval Electronic Systems Command. The SIM VANS systems simulate a real-world environment for training and testing military personnel in electronic warfare.
- SYSCON defined the evaluation criteria for a system used to standardize financial management needs for the research and development activities of the U.S. Navy Supply Command. Software verification and validation, site surveys, and management planning services are also being provided.
- In May 1983 SYSCON signed a master contract with the Naval Sea Systems Command for a ceiling amount of \$24.4 million. The contract provides for a number of ongoing projects involving a broad range of services for 24 separate agencies. Services will be provided by the Technical Services, Computer Systems, and Systems Engineering business segments.
- Professional services facilities management contracts, under which SYSCON provides staffing and management of client-owned computer and test facilities, include:
 - A contract for management of a Navy land-based evaluation facility for systems integration, test, and certification of submarine command and control software.
 - Management of an environmental test facility for the NASA Ames Research Center, which provides quality assurance tests on equipment used in connection with space projects, including the Space Shuttle.
 - Since 1975 SYSCON has been responsible for the development and operation of Aviation Training Support Systems (ATSS) used for scheduling and training military personnel. The company currently operates 26 sites where ATSS systems are installed under a contract signed with the Naval Training Equipment Center in 1982.
 - The company also operates a training facility computer center for the U.S. Army at Fort Sill (OK).
- As part of its Hardware/Software business segment, SYSCON markets turnkey systems, software products, and processing services to municipalities.
 - The On-Line Billing Information System (OBIS) provides on-line billing and refuse collection for small municipalities. OBIS runs on Hewlett-Packard 3000; Prime 50 and 750 Series; DEC PDP-11/23, 11/40, and 11/70; and SYSCON T-Series computers.
 - The product is available as a software package for \$20,000. There are six installations.

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- The turnkey version of OBIS, running on DEC PDP-11/23 computers, ranges in price from \$32,500 to \$60,000. There are three installations.
- There are currently three processing clients using OBIS on an interactive basis.
- Seven processing clients access SYSCON's COMTAS tax collection and revenue monitoring system. The system, currently available on a processing basis only, is hosted on a Hewlett-Packard 3000 and is being adapted to Prime 50 Series computers.
- A municipal information turnkey system using SYSCON software running on Prime 50 Series minicomputers is marketed by both SYSCON and Prime Computer under a joint marketing agreement that was announced in January 1983.
- The turnkey system, which ranges in price from \$100,000 to \$250,000, offers a range of applications including utility billing, financial management, accounts receivable, fixed assets management, and payroll/personnel.
- Applications available on the turnkey system are also sold as separate software packages priced at \$10,000 to \$25,000 each.
- SYSCON's PLMX software package is a high-level programming language and flexible cross compiler for use with microprocessor applications and is adaptable for real-time process control. There are 600 installations of PLMX, which runs on Tektronix 8002 and 8550 equipment or on any computer running under the CP/M operating system.
- In 1982 SYSCON began delivery of its 16-bit DEC PDP-11/23-based T-Series computers (T100/200/300). T-Series are general-purpose computers sold separately or in conjunction with various SYSCON software packages and services. With 50 installations, hardware prices range from \$17,000 to \$40,000.
- SYSCON markets a network link that offers high-speed communications capabilities between its own T-Series computers as well as DEC PDP and VAX Series computers.
- SYSNET, a companion networking package developed by SYSCON, allows point-to-point networking capability. SYSNET accelerates data transfer when used in conjunction with the network link.
- SYSCON markets several microprocessor-based products, including the following:
 - Meter Reader/VERSATERM^{T.M.} is a hand-held unit used by utility companies to automate meter reading. Information is entered into the unit for storage and later transfer to a computerized billing system.

SYSCON CORPORATION

- Test Input Device is a similar unit used for storing test answers for later transfer to a computerized student testing and scoring system.
- GCT-1000 is a checkweighing station used to check the quantity of product inserted in containers against measures within predetermined limits.

INDUSTRY MARKETS

- Of the approximately 95% of SYSCON's fiscal 1982 revenue derived from the U.S. Department of Defense, about 76% was from the U.S. Navy. Of the remaining 5% of revenue, 2% was from municipal governments and 3% from commercial customers.

GEOGRAPHIC MARKETS

- One hundred percent of SYSCON's fiscal 1982 revenue was derived from the U.S.
- Branch offices are located in Encino, Eureka, Oxnard, Ridgecrest, San Diego, Sunnyvale, and Vallejo (CA); Colorado Springs (CO); El Paso; Albuquerque; Gautier (MS); Dayton; St. Petersburg and Orlando (FL); Newport (RI); New London (CT); Mt. Laurel (NJ); Columbia and Germantown (MD); Arlington, King George, Virginia Beach, and Williamsburg (VA), and Puerto Rico.

COMPUTER HARDWARE AND SOFTWARE

- Equipment is maintained in data centers in the following locations:
 - Washington, D.C.:
 - HP 3000-III, MPE-III.
 - DEC VAX-11/780, VMS.
 - Newport (RI):
 - HP 3000-III, MPE-III.
 - HP 3000 Series 33, MPE-III.
 - HP 9845.
 - DEC VAX-11/780, VMS.
 - Prime 2250, PRIMOS.
 - Ridgecrest (CA):
 - DEC PDP-11/40, RSTS/E.
 - DEC PDP-11/70, RSTS/E.

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- San Diego (CA):
 - . HP 3000-III, MPE-III.
 - . DEC VAX-11/780, VMS.
 - . Prime 550, PRIMOS.
 - . Prime 750, PRIMOS.
 - . Prime 2250, PRIMOS.
 - . Data General NOVA 1200.
- Microcomputers from a variety of vendors are installed at all SYSCON office locations.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

July 1994

Systematics Information Services, Inc.

Chairman & CEO: John E. Steuri
President & COO: Stephen A. Carns
4001 Rodney Parham Road
Little Rock, AR 72212-2496
Phone: (501) 220-5100
Fax: (501) 220-5173

Status:	Subsidiary
Parent:	ALLTEL Corporation
Employees:	7,500 (12/93)
Revenue:	\$ 678,000,000
Fiscal Year End:	12/31/93

Key Points

- During 1993, Systematics formed a new subsidiary, Systematics Healthcare Services, Inc.
- In 1993, Systematics' parent company—ALLTEL Corporation—acquired TDS Healthcare Systems Corporation of Atlanta (GA). TDS now operates as a division of Systematics Healthcare Services, Inc.
- Within a few months of acquiring TDS, Systematics signed its first outsourcing contract in the healthcare market, with St. Joseph's Hospital of Parkersburg (WV).
- In 1993, Systematics entered into a 10-year outsourcing arrangement with GTE Telecommunications Products and Services Group to outsource its cellular billing as well as provide software and conversion services to GTE.
- Computer Power, Inc., Systematics' mortgage services division, announced the CPI Interchange™, a satellite communications network linking loan originators, lenders,

investors and mortgage service providers nationwide.

- In 1994, Systematics announced a software and services contract with Moscow Savings Bank of the Russian Federation.
- During 1994, Systematics announced an outsourcing contract with Hibernia National Bank, New Orleans to provide outsourcing services for Hibernia's information processing operations. Hibernia estimates it will achieve savings of almost \$40 million over eight years as a result of this contract.

Company Description

Founded in 1968, Systematics Information Services, Inc., through its operating divisions and subsidiaries, provides advanced applications software, information processing management and outsourcing services to the financial services, mortgage, telecommunications and healthcare industries.

In 1990, Systematics was acquired by ALLTEL Corporation of Little Rock (AR) in a pooling-of-interests transactions valued at \$500 million.

- ALLTEL, with 1993 revenue of \$2.34 billion, provides local telephone services, information services, cellular services and telecommunications equipment.
- Information services has become an increasingly important contributor to ALLTEL's growth, and in fiscal 1993 accounted for approximately 29% of ALLTEL's revenue.

Structure and Operations

Systematics is organized into four business subsidiary companies—Financial Services, Inc.; Telecommunications Services, Inc.; Healthcare

Services, Inc. and Computer Power, Inc. (mortgage services). Each of these companies offer software products as well as outsourcing and consulting services.

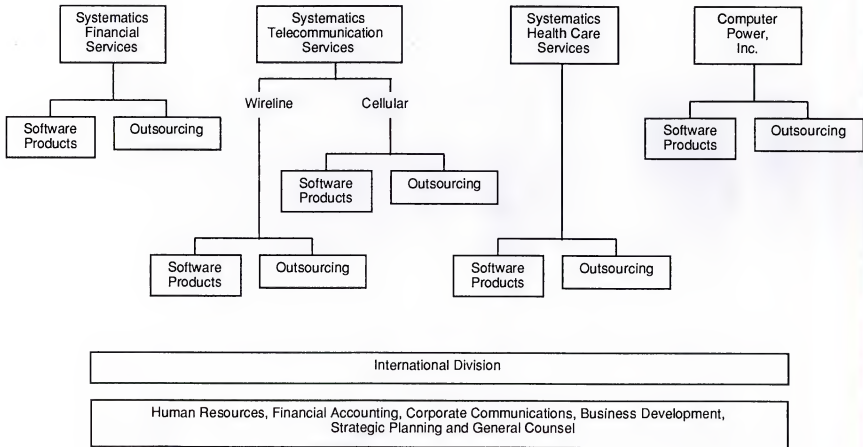
- The consulting function is currently under Financial Services.
- Corporate support units include Human Resources; Finance/ Accounting; Corporate Communications, Strategic Planning and General Counsel.
- The International Division supports all business units.

A business model of the organization appears on the following page.

- Financial Services, Inc., headquartered in Little Rock (AR), provides systems operations and disaster recovery processing services, applications software products, consulting and training professional services and turnkey systems to the financial services industry.
- The Operations Division is responsible for all financial division outsourcing customers and the payment services business.
- The Software Division is responsible for marketing application software products and supporting software clients.
- The Outsourcing Marketing group is responsible for marketing processing (outsourcing) services.
- The Community Bank division develops, markets and supports software products, outsourcing services and AS/400-based turnkey systems to community banks and thrifts.

Exhibit

Business Model
Systematics Information Services, Inc.



- Financial Services operates five strategic business units: Branch Automation; Consulting Services; Disaster Recovery ; Training Services and Treasury Services.
- Telecommunications Services, Inc., headquartered in Little Rock (AR), provides software and outsourcing services to wireline and cellular telephone companies in the U.S., Canada and the U.K.
- Computer Power, Inc., headquartered in Jacksonville (FL), provides single family mortgage loan processing services and applications software.
- Healthcare Services, Inc., headquartered in Little Rock (AR), provides applications software, outsourcing services, implementation and support, hardware maintenance, network management, disaster planning and user training to the healthcare industry.

The International Division markets and supports application products and services across all business units, for customers primarily located outside the U.S.

Company Strategy

Systematics' current strategy is to expand in its chosen markets—financial services providers, mortgage companies, telecommunications companies (wireline and cellular) and healthcare providers—and to seek markets in other business sectors that are synergistic with its expertise.

Systematics continues to enhance its software offerings to keep it competitive and up to date. Next to its investment in people, the company's largest investment has always been in its software.

Systematics has been expanding its software through acquisitions, investments and licensing agreements. The company continues to form agreements with third-party providers to assist its customers with niche products and services.

Financials

Total 1993 revenue reached \$678 million, a 19% increase over 1992 revenue of \$569 million. Operating income rose 23%, from \$95 million in 1992 to \$117 million in 1993. A five-year financial summary follows:

Systematics Information Services, Inc. Five-Year Financial Summary (\$ Millions)

Item	Fiscal Year				
	1993	1992	1991	1990	1989
Revenue	\$678	\$569	\$477	\$338	\$295
• Percent increase from previous year	19%	19%	41%	15%	14%
Operating income	\$117	\$94	\$56	\$44	\$39
• Percent increase from previous year	23%	70%	27%	13%	16%

The increase in 1993 revenues was attributed to the following:

- New outsourcing contracts (both on-site and centralized), including telecommunications and new item processing operations
- Additional services provided under existing facilities management contracts
- An increase in the number of mortgage loans processed
- Increased usage of new mortgage processing service offerings
- Increased nationwide refinancing activity in 1993 and 1992 contributing to revenue through additional transaction processing
- Recording of TDS operations from the date of acquisition

Interim results: Revenue for the three months ending March 31, 1994 reached \$200 million, a 27% increase over \$158 million for the same period in 1993. Operating income for the period rose 1%, to \$29 million.

Market Financials

The company markets its products and services to the financial, mortgage, telecommunications and healthcare industries.

There are approximately 1,100 customers being served by Systematics.

Revenue Analysis by Product Line:

Approximately 84% of Systematics' 1993 revenue was derived from systems operations, 13% from application software products, 3% from consulting, education, training and disaster recovery planning. A three-year summary of source of revenue follows:

Systematics Information Services, Inc. Three-Year Source of Revenue Summary (\$ Millions)

Product/Service	Fiscal Year					
	1993		1992		1991	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Systems operations	\$570	84%	\$489	86%	\$406	85%
Applications software	88	13%	63	11%	57	12%
Other (a)	20	3%	17	3%	14	3%
Total	\$678	100%	\$569	100%	\$477	100%

(a) Includes consulting, education, training and disaster recovery planning.

Geographic Markets

Systematics serves customers in 49 states and in 34 countries outside the U.S.

Acquisitions

Recent acquisitions made by Systematics include the following:

- In 1993, Systematics' parent company—ALLTEL Corporation—acquired TDS Healthcare Systems Corporation of Atlanta (GA) for approximately two million ALLTEL shares.
- TDS develops healthcare information systems software and serves more than 200 hospitals in the U.S., Canada, the U.K. and Europe.
- TDS had approximately 500 employees and 1992 revenue of about \$85 million at the time of the acquisition.
- TDS now operates as a division of Systematics Healthcare Services, Inc.
- During 1993, Computer Power, Inc. acquired Busch Analytics to enable customers to facilitate analysis of mortgage portfolios.

Employees

As of December 1993, Systematics had approximately 7,500 employees.

Key Products and Services

Systematics' products and services are designed for the financial industry (banks, savings institutions, credit unions, mortgage service, and finance companies), telecommunications industry (telephone and cellular companies) and the healthcare industry (hospitals and nursing home providers).

Systematics provides on-site and remote outsourcing services to financial institutions, mortgage companies, healthcare providers and cellular and wireline telephone companies.

Financial Services:

In the financial services arena, Systematics offers the following products and services:

- Systematics offers on-site and remote processing services as well as single application outsourcing services.
- Systematics has a complete set of integrated banking and financial applications software termed Systematics Integrated Financial Software targeted at financial services companies and financial institutions exceeding \$1 billion in assets. The Financial Services business unit also provides consulting services to community banks and larger banks.
- The software products run on IBM mainframes under DOS/VSE, VM and MVS with client/server modules.
- All applications are available through Systematics' Operations Processing Services or may be purchased as individual software products or as a total integrated system. All products are backed by training, documentation, product enhancements, support and consulting.
- International capabilities for Systematics' software include an Origination and Warehouse System, Translator Facility and multicurrency features.
- Systematics' wholesale banking software is an integrated, multicurrency package designed to run in a PC LAN, UNIX or IBM AS/400 environment.
- Systematics also markets the Horizon Banking System, a multibank, multibranch system for community banks with \$50 million to over \$1 billion in assets. Horizon is an AS/400-based system available as a software product, a turnkey system or outsourced offering.

Systematics Information Services, Inc.

Disaster Recovery:

Customers, primarily financial institutions, may subscribe to either a shell facility or a fully-equipped facility, generally for a term of five years.

Disaster backup services are marketed only to Systematics' contract clients.

Consulting Services:

Systematics provides a range of consulting services that address business issues and the application of technology to improve productivity and financial performance.

- The services are geared to the financial industry, where Systematics offers applications software solutions.
- Consultants are experienced, successful bankers.

Systematics' business consulting services focus on the following banking lines :

- Back-office operations
- Retail banking and delivery systems
- Lending and loan operations
- MIS and technology

Training Services:

Systematics assists financial services clients in implementing training in their organizations. Training services assistance includes :

- Assessing needs
- Developing strategy
- Developing/ customizing courses and course materials
- Training/ coaching trainers
- Post-conversion training reviews

Formal courses are offered through Systematics' Career Development Center in Little Rock, providing training support for Systematics' software products to employees and clients.

Branch Automation Services:

Systematics' branch automation solution is a set of products that operate on PC LANs in branch offices and that are compatible with Systematics' host banking applications.

- Systematics provides an authoring tool, model transaction sets for teller and platform functions, and the host connectivity software that allows the branches to access files at the central mainframe computer.

To reduce the risk and time to implement a branch automation system, Systematics provides complete turnkey or partial systems integration services.

Telecommunications Services:

Systematics Telecommunications Services, Inc. provides systems operations processing services and applications software products to wireline and cellular telephone companies.

Vituoso, acquired from C-TEC during 1990, is a cellular telephone billing and information system for IBM AS/400 and mainframe computers targeted to cellular telephone companies.

Modules include:

- Marketing
- Credit Bureau Interface
- Account Management
- Switch Management/ Service Order Processing
- Point-of-Sale/Inventory Management
- Accounts Receivable
- Collections/ Treatment

- Commissions
- Customer Care
- Billing
- Roamer Processing
- Unbilled Call Access

Computer Power, Inc. (CPI):

CPI is a leading provider of data processing services and applications software to financial institutions originating and/or servicing single-family mortgage loans. Other services include consulting, training and portfolio conversion.

CPI also offers an integrated package of information processing solutions as follows:

- **Loan Origination**—From laptop origination through closing.
- **Secondary Marketing**—Complete risk analysis and position management including delivery and post-closing document tracking.
- **Loan Servicing**—Customer service, escrow management, default management, investor reporting and accounting, cash management and interfaces to Systematics' retail systems
- **Support Services**—Consulting, training, conversion and acquisition services and customized business solutions.
- **Management Services**—Full outsourcing, remote processing options, Executive Decision Making Support, Portfolio Evaluation and Disaster Recovery.

In 1993, CPI introduced CPI Interchange™, a satellite communications network linking loan originators, lenders, investors and mortgage service providers nationwide.

In 1993, CPI also announced its new Renaissance Strategic Architecture that provides customers

with the flexibility and enhanced capability to improve mortgage profitability and service quality.

Healthcare Services:

Systematics Healthcare Services, Inc. provides outsourcing services and applications software products to the healthcare industry.

The TDS 7000 Series is TDS's family of health care information systems with full functional support for physicians, nurses and other clinicians, based on a single, integrated Permanent Patient Record.

- The Permanent Patient Record can maintain as many as 16 million individual, lifetime records, integrating information from inpatient and outpatient activities.
- TDS 7000 Series includes four fully integrated modules as follows:
 - Healthcare Module
 - Health Management Module
 - General Financial Module
 - Decision Support Module
- The TDS 7000 Series runs on IBM 43XX or 30XX series systems under VSE and MVS and supports IBM's SNA. The TDS 7000 Series is available in several models to clients as an in-house system or as a processing service.
- The TDS 7000 Series was released in 1990 as the successor to the TDS HealthCare 4000 System. TDS continues to support the TDS HealthCare 4000 System as its clients migrate to the TDS 7000 Series.

TDS also provides installation consulting services to assist customers throughout the implementation process, providing implementation teams, support and user training.



Clients

Systematics has existing contracts with over 1,100 U.S. and international customer organizations.

Systematics' customers range from community banks to some of the U.S.'s largest financial institutions—including Chemical Bank, NationsBank and Citibank. Major non-U.S. financial services clients include the National Bank of Greece, Okobank in Finland, National Bank of New Zealand and Bank of Ayudhya in Thailand.

Telecommunications customers include GTE's cellular division and Mercury One-2-One.

Healthcare customers include hospitals such as St. Joseph's Hospital, among others.



Marketing and Sales

Systematics has domestic sales offices in Little Rock (AR), Los Angeles (CA), New York (NY), Jacksonville and Orlando (FL) and Atlanta (GA). Systematics has regional offices in the U.K., Hong Kong and Singapore that handle sales and support in those regions.

Competition

Systematics' major competitors include Electronic Data Systems, IBM ISSC, Fiserv and Hogan Systems.

INPUT Assessment

Systematics is a very strong player in the financial services outsourcing market. The company has strategically implemented a business model, whereby each of its business units is able to offer a suite of software products as well as outsourcing services to customers.

A challenge that Systematics faces is to successfully move forward in its new market—the healthcare industry.

Parent Company:

ALLTEL Corporation
One Allied Drive
Little Rock, AR 72202
(501) 661-8000

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

February 1996

Systems & Computer Technology Corporation

Chairman,
President & CEO: Michael J. Emmi
4 Country View Road
Malvern, PA 19355
Phone: (610) 647-5930
Fax: (610) 725-7411
Internet: [Http://www.sctcorp.com](http://www.sctcorp.com)



Status:	Public
Employees:	2,066 (2/96)
Revenue:	\$ 176,148,000
Fiscal Year End:	9/30/95

Key Points

- Systems & Computer Technology Corporation (SCT) is a provider of computing management outsourcing services and administrative applications software to the higher education, government, utilities, cable/telecommunications and manufacturing/distribution markets.
- In late 1995, SCT received the largest annual billing contract in the company's

history—an outsourcing contract with the City of Indianapolis/Marion County worth up to \$80 million.

- In June 1995, SCT entered the manufacturing and distribution markets with the acquisition of Adage Systems International, a provider of enterprise resource planning software products.
- The company claims its current customer base in the higher education market serves about one-half of all college students in the U.S.

Company Description

SCT provides systems operations, associated support services and applications software products to government agencies, educational institutions, utilities, cable/telecommunications and manufacturing/distribution companies worldwide. Hardware sales are also made in conjunction with the company's BANNER® software products.

SCT was founded in 1968 to provide services to the higher education market. The company has made several acquisitions since 1990 which have expanded its product offerings, market opportunities and expertise.

- The acquisition of Moore Governmental Systems, Inc. in 1990 and Mentor Information Systems in 1991 expanded SCT's offerings to state, local and municipal governments as well as not-for-profit organizations.
- The acquisition of Digital Systems, Inc. in 1991 and IntelliSource Software Group in late 1994 expanded SCT's offerings to the utilities industry.
- SCT acquired one of its major competitors in the higher education market in mid-1992 with the purchase of Information Associates (IA) from Dun & Bradstreet Software. The acquisition added the IA-Plus™ series of software products to SCT's higher education line-up.
- The acquisition of Adage Systems in June 1995 positioned SCT as a player in the manufacturing and distribution markets.
- A 1995 contract with Continental Communications (formerly Continental Cablevision) initiated SCT's entry into the cable/telecommunications market.

Organization and Structure

SCT is currently organized into three major areas of business as follows:

- The Technology Management Division (TMD) (formerly the Information Resource Management Division) is based in Malvern (PA) with approximately 948 employees. TMD provides outsourcing and integrated systems operations, processing and professional services to higher education, government, utilities and other markets. TMD's premier offering is OnSite services. A regional office is in Irvine (CA).
- SCT Software Group includes the following units:
 - SCT Education Systems, based in Malvern (PA), has approximately 457 employees. SCT Education Systems develops, licenses, and supports SCT's applications software for higher education clients. This unit's principal offerings are the BANNER series and IA-Plus series of products. Regional offices are in Dallas (TX), Irvine and San Diego (CA), Reston (VA) and Rochester (NY).
 - SCT Government Systems, based in Lexington (KY), has approximately 129 employees. This division provides applications software, professional services, hardware and supplies for state, local and municipal governments, courts and not-for-profit organizations. Primary products include BANNER, MONITOR™, SPECTRUM™ and PSAS™. Regional offices are in Atlanta (GA), Baton Rouge (LA), Dallas (TX), Malvern (PA) and Salt Lake City (UT).
 - SCT Utility Systems, Inc., based in Columbia (SC), has approximately 167 employees. This division provides

customer information, human resource, finance and billing software for utility companies, electric cooperatives, and municipal utilities. Primary products are BANNER, MONITOR, REACT™ and RESPONSE™. Regional offices are in Dallas (TX), Irvine and San Diego (CA) and Malvern (PA).

- SCT Manufacturing and Distribution Systems (formerly Adage Systems), headquartered in Malvern (PA) with approximately 70 employees, provides enterprise resource planning software products (ERP) to multinational users in the manufacturing and distribution industries. Regional offices are in Atlanta (GA) and Detroit (MI).
- Systems Integration Division is a start-up group designed to provide full-service systems integration and to complement and support the other divisions' offerings.
- SCT International, Ltd., located in Basingstoke (England), was formed in early 1994 to provide SCT software and technology management services to clients in Great Britain, Continental Europe and throughout the world.

Company Strategy

SCT's goal is to be the leading provider of open systems solutions to customers in its vertical markets by providing systems operations services, applications software and leading-edge client/server technology.

In the systems operations/outsourcing market, SCT's strategy is to increase sales opportunities by bundling its applications software with its OnSite services to provide prospective clients with a total information system solution.

- SCT plans to make a significant entrance into the manufacturing/distribution marketplace with its 1995 acquisition of Adage Systems and plans to actively support and develop the ADAGE® ERP product.
- SCT plans to grow its mid-level services, such as systems implementation and integration, for all markets that it serves.

In the higher education software market, SCT is committed to providing advanced administrative systems for both client/server and centralized computing environments.

- SCT continues to evolve its BANNER Series of products for this market and has demonstrated its support for client/server with the release of BANNER 2.1, which supports the ORACLE 7 relational database and Developer/2000 graphical, client/server application development tools.
- SCT has successfully integrated the IA operations into the SCT Education Systems Division. The IA-Plus series product line supports centralized computing environments through five integrated systems.
- SCT will continue to expand its higher education client base outside the U.S. (Canada, Australia, South Africa, Mexico) and will focus on full-service and consultative offerings.

In the public sector market, SCT's mission is to provide administrative, revenue-enhancing and criminal justice systems through mission-critical software and customer support.

- SCT offers multiple operating systems and hardware platforms for its products, providing a flexible migration path for its clients and supporting the "reengineering" of government.

- The company is devoting resources to continually enhance its BANNER Series of products, which are based on client/server technology and the ORACLE RDBMS. Existing systems include finance, human resources, courts case management, records indexing, occupational tax and license, property tax and license, and utility customer information.

In the utilities market, SCT's mission is to meet the administrative needs of utilities providing gas, electric, water, wastewater, refuse and other services.

- With the introduction of the BANNER Utility Customer Information System—an open RDBMS customer service system—SCT now provides a solution that can be scaled to a wide range of utilities—from small midrange utilities to multimillion-consumer operations.
- SCT intends to expand into international markets and is focusing on large organizations overseas.

In the manufacturing/distribution market, SCT plans to offer a major new release of ADAGE that will include functional enhancements targeted to penetrate the process manufacturing marketplace. This release will operate on ORACLE and Microsoft SQLServer databases in addition to the currently supported CA-OpenIngres

databases. The new release will operate under Microsoft NT and Windows 95.

Financials

SCT's fiscal 1995 revenue reached \$176.1 million, a 19% increase over fiscal 1994 revenue of \$148.2 million.

- Net income was \$3.1 million, after the effect of an \$8.7 million charge for purchased research and development associated with the acquisition of Adage Systems in 1995.
- Without the impact of the \$8.7 million charge, net income and earnings per share for fiscal 1995 would have been \$11.8 million and \$0.80, respectively.
- A five-year financial summary appears on the following page.

Revenue Analysis by Product Line

Approximately 38% of SCT's fiscal 1995 revenue was derived from systems operations, 41% from software and hardware sales, 20% from maintenance and enhancement services and 1% from interest and other.

A three-year summary of source of revenue also appears on the following page.

Systems & Computer Technology Corporation
Five-Year Financial Summary
(\$ Millions, except per share data)

Item	Fiscal Year				
	9/95	9/94	9/93	9/92	9/91
Revenue	\$176.1	\$148.2	\$120.2	\$90.9	\$65.4
• Percent change from previous year	19%	23%	32%	39%	42%
Income (loss) before taxes	\$10.3	\$17.8	\$11.2	\$(1.6)	\$5.2
• Percent change from previous year	(a) (42%)	59%	800%	(b) (131%)	406%
Net income (loss)	\$3.1	\$11.6	\$9.6	\$(2.3)	\$4.7
• Percent change from previous year	(73%)	21%	517%	(149%)	(347%)
Earnings (loss) per share (c)	\$0.21	\$0.83	\$0.74	\$(0.19)	\$0.38
• Percent change from previous year	(75%)	12%	489%	(150%)	338%

(a) Includes a \$8.7 million charge for purchased research and development associated with the acquisition of Adage Systems.

(b) Includes a \$7.7 million charge for purchased research and development in connection with the acquisition of Information Associates in 1992.

(c) Fully diluted.

Systems & Computer Technology Corporation
Three-Year Source of Revenue Summary
(\$ Millions)

Product/Service	Fiscal Year					
	9/95		9/94		9/93	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Systems operations	\$66.9	38%	\$64.0	43%	\$53.7	45%
Software and hardware sales	72.0	41%	52.7	36%	40.0	33%
Maintenance and enhancements	35.1	20%	30.2	20%	26.0	22%
Interest and other	2.1	1%	1.3	1%	0.5	--
Total	\$176.1	100%	\$148.2	100%	\$120.2	100%

SCT management attributes the company's fiscal 1995 results to the following:

- Systems operations revenues rose 5% primarily due to several new agreements, including a five-year agreement with

Continental Communications which began in January 1995 and expanded throughout the year. Contract renewal rates, as a percent of annual revenue from contracts available for renewal, for fiscal 1995, 1994

and 1993 were 97%, 89% and 100%, respectively.

- Software and hardware sales and services revenue increased 37% due primarily to increases in licenses of BANNER Utilities and related services to both U.S. and international utilities, and a continued demand for the BANNER products and related services in the global higher education market.
- Maintenance and enhancements revenue rose 16% during fiscal 1995 due to continued high annual renewal rates and a growing base of installed clients primarily in the higher education market.

Interim Results

Revenue for the three months ending December 31, 1995 reached \$47.8 million, a 22% increase over \$39.2 million for the same period in 1994. Net income was \$2.3 million, compared to nearly \$3.0 million for the same period a year ago.

Market Financials

SCT's fiscal 1995 revenue was derived primarily from educational institutions, utilities, and government. Approximately 59% (\$103.9 million) came from higher education, 23% (\$40.1 million) from local government, 17% (\$29.9 million) from utility companies and the remaining 1% (\$2.2 million) from other markets.

The markets for SCT's products and services include:

- Higher education—Systems operations and applications software is marketed to colleges, universities, and other higher education institutions, including proprietary schools. Institutions with enrollments greater than 1,000 students

(of which there are approximately 2,200) represent SCT's target market.

- Local government—SCT markets its BANNER Series of administrative software to county and municipal governments of all sizes.
- Utilities—SCT's target utility market includes approximately 1,000 water, gas and electric utilities serving more than 25,000 consumers.
- Manufacturing/distribution—SCT will market the ADAGE product globally to more than 16,600 discrete and process manufacturing sites having more than \$100 million in revenues.

Geographic Markets

Approximately 87% of SCT's fiscal 1995 revenue was derived from the U.S. and 13% from international sources. The company has several clients outside the U.S., including sites in the Caribbean and the U.K.

Acquisitions

In June 1995, SCT completed the acquisition of Adage Systems International, Inc. of Westport (CT) for one million shares of SCT common stock valued at approximately \$10.9 million, plus possible additional considerations based on future performance.

- Adage, with approximately 70 employees and annual revenue of \$6 million, provides the ADAGE family of enterprise resource planning software for the manufacturing and distribution industries.
- Adage Systems will operate as part of the SCT Software Group.

In December 1994, SCT acquired IntelliSource Software Group, San Diego, a

division of Management Analysis Company for, \$1.2 million plus contingent payments based on future performance.

- IntelliSource Software Group products, which are based on the ORACLE RDBMS, serve the utility market.
- The products have been incorporated into SCT Utility Systems, Inc.

Employees

As of July 1995, SCT had approximately 1,900 employees.

As of February 1996, the company had 2,066 employees, of which approximately 450 are located at the company's corporate offices, with the remainder located throughout SCT's various offices and client sites.

These employees are segmented as follows:

Corporate	82
Technology Management	948
SCT Software Group	
- SCT Education Systems.....	457
- SCT Government Systems.....	129
- SCT Utility Systems, Inc.	167
- SCT Manufacturing & Distribution Systems.....	70
SCT International, Ltd.	
and other.....	<u>213</u>
	2,066

Key Products and Services

SCT offers a range of products and services through three distinct operating groups.

Technology Management Division (TMD)

TMD provides a variety of systems operations services, designed to assume total

or partial control and responsibility of information resources on a long-term or short-term basis for higher education institutions and government jurisdictions.

- SCT can manage, staff and support any or all aspects of a client's information systems and operations, including data center management and operations, short-term and long-range planning, user liaison and functional consulting, technical support services, application and systems software support, office automation, microcomputer maintenance and telecommunications services and network integration.
- TMD's premier offering is OnSite services, a comprehensive computing management service in which clients outsource their computer processing operation to SCT through a "public/private, or outsourcing, partnership."
- TMD now "bundles" BANNER administrative software applications with its OnSite services to provide clients with a complete solution for their information technology needs.
- SCT developed a Total Quality Management (TQM) methodology to be used as a tool for increasing client satisfaction and productivity by applying a standard approach to administration systems in order to easily identify opportunities for rightsizing and downsizing client systems.
- TMD also provides custom applications software development services for government, utilities and education. An OnSite services development team assumes full responsibility for the software development project, including the feasibility study, design, coding, testing, and implementation, using tested

methodologies for project management, software engineering, and quality assurance, such as automated project control, structured techniques, and process checkpoints.

- OnSite services contracts may be either on a fixed price or time-and-materials basis and typically cover an initial period of three-to-seven years. The company's contract renewal rates, as a percent of annual revenue from contracts available for renewal, were 100%, 89% and 100% fiscal 1995, 1994 and 1993, respectively.
- SCT is providing OnSite services at 18 higher education institutions, 19 local governments and several other locations.

Major recent contract announcements have included the following:

- A seven-year, \$80 million outsourcing contract with the City of Indianapolis/Marion County
- A seven-year contract renewal with Northampton County (PA) to provide technology transformation (rightsizing) from a mainframe to a client/server environment
- A ten-year, \$16 million contract extension with the Florida Institute of Technology to provide OnSite services through the year 2005
- A five-year, \$6.4 million contract with Continental Communications to provide OnSite services at four Continental locations throughout the U.S.
- A 10-year, \$10 million contract with the City of Greenville (SC) for OnSite services to operate Greenville's MIS department and help the City to transition from

multiple operating platforms to more flexible, functional open systems

- A seven-year, \$13 million contract with Roosevelt University, Chicago to provide an academic and administrative systems solution combining OnSite services with the BANNER Finance, Student and Financial Aid systems
- A seven-year, \$35 million contract with Dallas County (TX) for OnSite services
- A 10-year, \$14 million contract with Weld County (CO) for OnSite services and migration from mainframe to a downsized environment
- A seven-and-one-half-year, \$7 million contract with Adams County (CO) for OnSite services

SCT Software Group

SCT Education Systems

SCT Education Systems provides administrative applications software products to the higher education market. The division's product line was expanded during 1992 with the acquisition of IA and its IA-Plus series of products.

The BANNER Series of administrative information management systems for colleges and universities consists of five integrated systems.

- The BANNER line incorporates the ORACLE RDBMS and supports an open systems, client/server environment. The product is portable over many platforms, including DEC, IBM, AT&T, Sun Microsystems, Sequent, Data General, Hewlett-Packard and other UNIX-based systems.

- SCT's new BANNER 2.1 product features several enhancements to the BANNER line, including a complete GUI capability for users and support for ORACLE 7.
- BANNER systems for the higher education market include the following:
 - The BANNER Student System provides a range of administrative functions, from recruiting and registration to class schedules, records, and billing.
 - The BANNER Financial Aid System manages financial aid programs and includes such functions as tracking, budgeting, needs analysis and packaging.
 - The BANNER Alumni/Development System provides administrative support for fund-raising and development programs for colleges and universities.
 - The BANNER Finance System provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing, and budgeting.
 - The BANNER Human Resources System supports a range of human resource administration functions, including budgeting, staffing, applicant processing, EEO reporting, W-2 reporting, assignment processing, benefits administration, and payroll processing.
- BANNERQuest is a natural language query system that allows BANNER clients to access information from their administrative data base using plain English.
- There are currently more than 1,215 BANNER systems licensed to more than

400 customers in the higher education market.

IA-Plus series is designed to meet the administrative needs of the higher education market.

- IA-Plus systems operate on large-scale IBM and DEC computers using DB2 and proprietary operating systems. Versions for the IBM RS/6000 and DEC Alpha AXP are currently under development.
 - IA-Plus consists of five systems comprising a total of 15 modules. The systems, which may be purchased separately or together, include:
 - Student Information
 - Financial Aid
 - Financial Records
 - Human Resources
 - Alumni/Development
 - There are currently more than 1,650 IA-Plus systems licensed to more than 560 customers.
- Other products offered through SCT Education Systems include:
- VISAGE:Plus™, a graphical user interface to IA-Plus
 - EDI.Smart™, electronic transcript management/delivery software
 - FOCUS® Express, an ad hoc reporting tool for BANNER and IA-Plus using the FOCUS Report Writer from Information Builders

Recent contract announcements include:

- A seven-year, \$15 million contract with the State of Texas, Department of Information

Resources, allowing state colleges and universities to license BANNER and IA-Plus

- Licensing of BANNER Student, Finance and Human Resources systems by the Monterrey Institute of Technology (the largest private institution in Mexico), Benemerita Universidad Autonoma de Puebla (the third-largest public institution in Mexico), University of Guadalajara (the largest Western university in Mexico) and The Hong Kong Academy for Performing Arts
- Providing 16 two-year colleges of the South Carolina Board for Technical & Comprehensive Education with IA-Plus Human Resources
- An agreement with the Board of Regents of the University System of Georgia to make the full spectrum of BANNER software available to more than 30 state-funded colleges and universities and to assist with implementation

SCT serves 1,050 higher education institutions, including more than 46% of approximately 1,575 U.S. institutions having a population of more than 2,000 students. Globally, the company serves more than 42% of the 1,740 English speaking institutions.

SCT Government Systems

SCT offers the BANNER Series of administrative information management software to government jurisdictions and courts.

- The BANNER line incorporates the ORACLE RDBMS and supports an open systems, client/server environment. The product is portable over many platforms, including DEC, IBM, AT&T, Sun Microsystems, Sequent, Data General,

Hewlett-Packard and other UNIX-based systems.

- BANNER systems for government include:

- The BANNER Finance System provides financial data and management information in the areas of general ledger, purchasing/receiving, stores inventory, accounts payable, fixed assets, budget development, cost accounting, accounts receivable and, optionally, investment management.
- The BANNER Human Resources System supports a range of human resource administration functions, including applicant tracking, employment/compensation administration, employee relations administration, health and safety administration, benefits administration, position management, personnel services budgeting, time reporting, payroll calculation, payroll adjustments and history and tax administration.
- The BANNER Courts Management System empowers those involved in the judicial process to access information intelligently via docket management, document management, scheduling and accounts receivable capabilities.
- The BANNER Records Indexing System streamlines the records indexing process (including choice of a remote access capability) and can handle the critical areas of cash receipts and accounts receivable. It is particularly effective in the management of land records.
- The BANNER Occupational Tax & License System, which helps the user to maintain an accurate, well-managed tax and license system, includes functions for

account maintenance, accounting, collections, inspections/audits and checks/refunds.

- The BANNER Property Tax System simplifies multiyear tax administration, including system administration, real property administration/assessment, tax calculation, billing, collections and distributions.
- The BANNER Utility Customer Information System supports the business operations of customer account management, such as location information, customer information, billing and account history, accounts receivable, service orders, component inventory and reporting.

SCT Government Systems also provides customer service in the areas of systems integration, project management, training, specialized consulting and development and computing equipment and supplies.

SCT Government Systems has nearly 1,100 clients worldwide.

- New BANNER Courts clients include the Office of Prothonotary and Office of Register of Wills of Allegheny County (PA) Courts, Orange County (CA) Superior Court and the First Judicial District of Pennsylvania.
- Other new BANNER clients include the City of Austin (TX), the City of Duncanville (TX), the City of Fredericton (New Brunswick, Canada), the City of Galveston (TX), the City of Goldsboro (NC), the City of Grand Junction (CO), Metropolitan Transit Authority/Harris County (Houston, TX), Indiana Department of Natural Resources, Leon County (FL), the City of Manitowoc (WI)

Public Utilities, Muskegon County (MI), Potter County (TX), the City of Raleigh (NC), the City of Toronto, the City of Scottsdale (AZ) and Weld County (CO).

SCT Utility Systems, Inc.

SCT Utility Systems has more than 150 customers worldwide.

- The BANNER line incorporates the ORACLE RDBMS and supports an open systems, client/server environment. The product is portable over many platforms, including DEC, IBM, AT&T/NCR, Sun Microsystems, Sequent, Data General, Hewlett-Packard and other UNIX-based systems.
- BANNER systems for utilities include:

- The BANNER Finance System, an accrual-based system that provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing and budgeting
- The BANNER Human Resources System, supporting a range of human resource administration functions, including budgeting, staffing, applicant processing, EEO reporting, W-2 reporting, assignment processing, benefits administration and payroll processing
- The BANNER Utility Customer Information System, integrating billing, customer account management and related functions

As a result of the acquisition of IntelliSource Software Group, SCT has added three new, ORACLE-based software systems for the utility market:

- Inventory Management System
- Fuels Management System (FMS)
- Procurement System

Recently added clients include British Gas Service, North West Water, Ltd. (Warrington, England); Scottish Power (Scotland); Asheville/Buncombe Water Authority (Asheville, NC); the City of Columbus, Ohio Public Utilities Department (Divisions of Water and Sewerage & Drainage); the City of Raleigh (NC); Westcoast Energy; and the City of Richmond (VA).

SCT Manufacturing & Distribution Systems

SCT now offers the ADAGE enterprise resource planning (ERP) system to multinational users in the manufacturing and distribution industries.

- ADAGE includes 20 integrated modules targeted at hybrid manufacturing (discrete and process industries) and order fulfillment/distribution disciplines that address the sales, engineering, procurement, manufacturing, logistics, quality assurance and finance functions.
- The product, which uses a relational database management system, operates with all major server platforms, both Intel-based and UNIX, including Compaq, Data General, Digital, Hewlett-Packard, IBM, Sun and others.

Systems Integration

This new division provides information systems development, integration services and consulting within selected markets.

SCT International, Ltd.

SCT International, Ltd. is responsible for providing SCT software and consulting products and services to the utility industry in Great Britain and throughout the world.

Sample Clients

Technology Management—City of Indianapolis/Marion County, Dallas County (TX), Mohave County (AZ), Weld County (CO), Mississippi College, Fairfield University (CT), University of Medicine & Dentistry of New Jersey, Allen County (IN), Beaver County (PA), Butte County (CA), California Institute of Technology, Charleston County (SC), City of Ft. Wayne (IN), Kent County (DE), San Juan Hospital, City Computer Center of San Juan, The George Washington University (D.C.), Norwich University (VT)

SCT Education Systems—Indiana State University (IN), Johnson County Community College (KS), Massachusetts Institute of Technology (MA), State University of New York (NY), University of Nebraska (NE), William Marsh Rice University (TX), University System of Georgia

SCT Government Systems—City of Dayton (OH), St. Lucie County (FL), American Red Cross (Charlotte, NC), Boston Health and Hospitals (MA), City of Baton Rouge (LA), City of Pontiac (MI), Delaware River Port Authority (NJ), Allegheny County (PA), Orange County (CA), City of Toronto

SCT Utility Systems—Albany Water, Gas & Light Commission (GA), City of Alexandria (LA), Anoka Electric Cooperative (MN), Berea College (KY), City of Dayton (OH), Mid-Carolina Electric (SC), Water Works and Sanitary Sewer Board of the City of Montgomery (AL), Palmetto Electric

Cooperative (SC), City of Poway (CA), City of Regina (Saskatchewan), Village of Schaumburg (IL), St. Lucie County (FL), City of West Palm Beach (FL), Agua de Mexico (Mexico City), North West Water, Ltd. (U.K.), British Gas Service

SCT Manufacturing & Distribution Systems—Basic American Foods, Domino Sugar and Para-Chem

Systems Integration—Continental Communications, National Media Corp. (Philadelphia, PA), Westcoast Energy (Vancouver) and Electronics Boutique (Westchester, PA)

Marketing and Sales

SCT has a sales force of approximately 80 direct salespersons and support staff, of which approximately 67 sell SCT's applications software products and 13 sell OnSite services.

SCT also has various cooperative marketing agreements with hardware and software suppliers.

Alliances

SCT is a value-added reseller of Oracle database products and derives commission revenue on ORACLE licenses.

SCT also has established marketing relationships for its BANNER series with DEC, AT&T/NCR, Sun, Data General, Hewlett-Packard and Sequent.

SCT has an agreement with Perception Technology to jointly develop voice technology capabilities for both BANNER and IA-Plus products.

Competitors

Systems operations competitors include IBM, Andersen Consulting, Computer Sciences Corporation, Electronic Data Systems, Business Records Corporation and in-house data processing departments.

Within the higher education market, principal software competitors include American Management Systems, PeopleSoft, Oracle and Datatel.

The local government and utility markets are highly fragmented and competition varies significantly depending on customers' computing platforms. Competitors include PeopleSoft, Oracle, Bitech and Ross Systems.

In the utilities market, competitors include Severn Trent, ORCOM, IBM and Andersen Consulting.

For finance and human resource systems, Oracle Corporation markets a system that competes with SCT's BANNER Finance and Human Resources systems.

In the area of manufacturing and distribution, competitors include SAP, Baan, Datalogix, Oracle, QAD, Ross Systems and System Software Associates.

INPUT Assessment

SCT's strengths include:

- Strong BANNER product line supporting multiple operating systems and hardware platforms in multiple markets, worldwide
- Satisfied base of software and computing management customers
- Significant power providing client/server and open systems solutions to its selected markets

- Successful transition to client/server platforms for BANNER software for the higher education market

Challenges include:

- Growing mid-level services, such as systems implementation and integration
- Expanding the company's client base outside the U.S.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1995

Systems & Computer Technology Corporation

Chairman,
President & CEO: **Michael J. Emmi**
4 Country View Road
Malvern, PA 19355
Phone: (610) 640-5200
Fax: (610) 725-7411



Status:	Public
Employees:	1,800 (8/95)
Revenue:	\$ 148,214,000
Fiscal Year End:	9/30/94

Key Points

- Systems & Computer Technology Corporation (SCT) is a provider of computing management outsourcing services and administrative applications software to the higher education, government, utilities, cable/telecommunications and manufacturing/distribution markets.

- In June 1995, SCT entered the manufacturing and distribution markets with the acquisition of Adage Systems International, a provider of enterprise resource planning software products.
- The company claims its current customer base in the higher education market serves about one-half of all college students in the U.S.
- SCT offers several software products for administrative applications in the client/server environment, including BANNER[®], which supports the ORACLE relational data base management system

(RDBMS) and is offered to higher education, government and public and private utilities. BANNER software systems are licensed to approximately 380 clients. In addition, the group's IA-Plus™ Series of software for mainframe users is used by approximately 540 clients.

Company Description

SCT provides systems operations, associated support services and applications software products to government agencies, educational institutions, utilities, cable/telecommunications and manufacturing/distribution companies worldwide. Hardware sales are also made in conjunction with the company's BANNER software products.

SCT was founded in 1968 to provide services to the higher education market. The company has made several acquisitions since 1990 which have expanded its product offerings, market opportunities and expertise.

- The acquisition of Moore Governmental Systems, Inc. in 1990 and Mentor Information Systems in 1991 expanded SCT's offerings to state, local and municipal governments as well as not-for-profit organizations.
- The acquisition of Digital Systems, Inc. in 1991 and IntelliSource Software Group in late 1994 expanded SCT's offerings to the utilities industry.
- SCT acquired one of its major competitors in the higher education market in mid-1992 with the purchase of Information Associates (IA) from Dun & Bradstreet Software. The acquisition added the IA-Plus Series of software products to SCT's higher education line-up.
- The acquisition of Adage Systems in June 1995 positioned SCT as a player in the manufacturing and distribution markets.
- A 1995 contract with Continental Cablevision initiated SCT's entry into the cable/telecommunications market.

Organization and Structure

SCT is currently organized into three major areas of business as follows:

- The Information Resource Management (IRM) Division, based in Malvern (PA) with approximately 900 employees, provides outsourcing and integrated systems operations, processing and professional services to higher education, government, utilities and other markets. IRM's premier offering is OnSite services. A regional office is in Irvine (CA).
- SCT Software Group includes the following units:
 - SCT Education Systems, based in Malvern (PA) and Rochester (NY), has approximately 425 employees. SCT Education Systems develops, licenses, and supports SCT's applications software for higher education clients. This unit's principal offerings are the BANNER series and IA-Plus Series of products. Regional offices are in Atlanta (GA), Dallas (TX), Irvine and San Diego (CA) and Reston (VA).
 - SCT Government Systems, based in Lexington (KY), has approximately 160 employees. This division provides applications software, professional services, hardware and supplies for state, local and municipal governments, courts and not-for-profit organizations. Primary products include BANNER, MONITOR™, SPECTRUM™ and PSAS™. Regional

offices are in Baton Rouge (LA), Irvine (CA) and Malvern (PA).

- SCT Utility Systems, Inc., based in Columbia (SC), has approximately 110 employees. This division provides customer information, human resource, finance and billing software for utility companies, electric cooperatives, and municipal utilities. Primary products are BANNER, MONITOR, REACT™ and RESPONSE™. Regional offices are in Irvine and San Diego (CA) and Malvern (PA).
- SCT Manufacturing and Distribution Systems (formerly Adage Systems), headquartered in Malvern (PA) with 70 employees, provides enterprise resource planning software products (ERP) to multinational users in the manufacturing and distribution industries.
- Systems Integration Division is a start-up group designed to provide full-service systems integration and to complement and support the other divisions' offerings.
- SCT International, Ltd., located in Basingstoke (England), was formed in early 1994 to provide SCT software and consulting to the utility industry in Great Britain and throughout the world.

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SCT's goal is to be the leading provider of open systems solutions to customers in its vertical markets by providing systems operations services, applications software and leading-edge client/server technology.

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- SCT has successfully integrated the IA operations into the SCT Education Systems Division. The IA-Plus Series product line supports centralized computing environments through five integrated systems.
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- The company is devoting resources to continually enhancing its BANNER Series of products, which are based on client/server technology and the ORACLE RDBMS. Existing systems include finance, human resources, courts case management, records indexing, occupational tax and license, property tax and license, and utility customer information.

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- With the introduction of the BANNER Utility Customer Information System—an open RDBMS customer service system—SCT now provides a solution that can be scaled to a wide range of utilities—from small midrange utilities to multimillion-consumer operations.
- SCT intends to expand into international markets and is focusing on large organizations overseas.

Financials

SCT's fiscal 1994 revenue reached \$148.2 million, a 23% increase over fiscal 1993 revenue of \$120.2 million. Net income rose 21% to \$11.6 million.

A five-year financial summary follows:

Systems & Computer Technology Corporation Five-Year Financial Summary (\$ Millions, except per share data)

Item	Fiscal Year				
	9/94	9/93	9/92	9/91	9/90
Revenue	\$148.2	\$120.2	\$90.9	\$65.4	\$46.1
• Percent change from previous year	23%	32%	39%	42%	8%
Income (loss) before taxes	\$17.8	\$11.2	\$(1.6)	\$5.2	\$(1.7)
• Percent change from previous year	59%	800%	(131%) (a)	406%	(153%)
Net income (loss) (b)	\$11.6	\$9.6	\$(2.3)	\$4.7	\$(1.9)
• Percent change from previous year	21%	517%	(149%)	(347%)	(159%)
Earnings (loss) per share (c)	\$0.83	\$0.74	\$(0.19)	\$0.38	\$(0.16)
• Percent change from previous year	125	489%	(150%)	338%	(162%)

(a) Includes a \$7.7 million charge for purchased research and development in connection with the acquisition of Information Associates in 1992.

(b) Includes net operating loss carryforwards of \$2.9 million in fiscal 1993, \$180,000 in fiscal 1992, \$1.7 million in fiscal 1991, \$200,000 in fiscal 1990, and \$1.3 million in fiscal 1989.

(c) Fully diluted.

Revenue Analysis by Product Line

Approximately 43% of SCT's fiscal 1994 revenue was derived from systems operations,

36% from software and hardware sales, 20% from maintenance and enhancement services and 1% from interest and other. A three-year summary of source of revenue follows:

**Systems & Computer Technology Corporation
Three-Year Source of Revenue Summary
(\$ Millions)**

Product/Service	Fiscal Year					
	9/94		9/93		9/92	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Systems operations	\$64.0	43%	\$53.7	45%	\$43.7	48%
Software and hardware sales	52.7	36%	40.0	33%	33.4	37%
Maintenance and enhancements	30.2	20%	26.0	22%	13.1	14%
Interest and other	1.3	1%	0.5	--	0.7	1%
Total	\$148.2	100%	\$120.2	100%	\$90.9	100%

SCT management attributes the company's fiscal 1994 results to the following:

- Systems operations revenues rose 19% primarily due to a full year's revenues from a 10-year contract with the University of Medicine and Dentistry of New Jersey, which commenced in July 1993 and two contracts signed during the year. Contract renewal rates, as a percent of annual revenue from contracts available for renewal, for fiscal 1994, 1993 and 1992 were 89%, 100% and 62%, respectively.
- Software and hardware sales and services revenue increased 32% due primarily to increases in licenses of BANNER Utilities and related services to both U.S. and international utilities and a continued demand for the BANNER products and related services in the global higher education market.
- Maintenance and enhancements revenue rose 16% during fiscal 1994 due to

continued high annual renewal rates and a growing base of installed clients.

Interim Results

Revenue for the nine months ending June 30, 1995 reached \$129.1 million compared to \$107.3 million for the same period in 1994. Net income was \$1.6 million (after a non-recurring charge for purchased research and development following the Adage Systems acquisition) compared to \$7.7 million for the same period a year ago.

Market Financials

SCT's fiscal 1994 revenue was derived primarily from educational institutions, utilities, and government. Approximately 64% (\$94.9 million) came from higher education, 26% (\$38.5) from local government, 8% (\$11.9 million) from utility companies and the remaining 2% (\$2.9 million) from other markets.

The markets for SCT's products and services include:

- Higher education—Systems operations and applications software is marketed to colleges, universities, and other higher education institutions, including proprietary schools. Institutions with enrollments greater than 1,000 students (of which there are approximately 2,200) represent SCT's target market.
- Local government—SCT markets its BANNER Series of administrative software to county and municipal governments of all sizes.
- Utilities—SCT's target utility market includes approximately 2,500 public and private water, gas and electric utilities serving from 50,000 to 3.5 million consumers.
- Manufacturing/distribution—SCT will market the ADAGE product globally to more than 16,000 discrete and process manufacturing sites having more than \$100 million in revenues.

Geographic Markets

Virtually 100% of SCT's fiscal 1994 revenue was derived from the U.S. The company has several clients outside the U.S., including sites in the Caribbean and the U.K.

Acquisitions

In June 1995, SCT completed the acquisition of Adage Systems International, Inc. of Westport (CT) for one million shares of SCT common stock, plus possible additional considerations based on future performance.

- Adage, with approximately 70 employees and annual revenue of \$6 million, provides the ADAGE family of enterprise resource

planning software for the manufacturing and distribution industries.

- Adage Systems will operate as part of the SCT Software Group.

In December 1994, SCT acquired IntelliSource Software Group, San Diego, a division of Management Analysis Company for \$1.2 million plus contingent payments based on future performance.

- IntelliSource Software Group products, which are based on the ORACLE RDBMS, serve the utility market.
- The products have been incorporated into SCT Utility Systems, Inc.

Employees

As of July 1995, SCT had approximately 1,800 employees, of which approximately 400 are located at the company's corporate offices, with the remainder located throughout SCT's various offices and client sites.

These employees are segmented as follows:

Information Resource Management.....	900
SCT Software Group	
- SCT Education Systems	425
- SCT Government Systems.....	160
- SCT Utility Systems, Inc.	110
- SCT Manufacturing & Distribution Systems	70
SCT International, Ltd.	
and other	<u>135</u>
	1,800

Key Products and Services

SCT offers a range of products and services through three distinct operating groups as described below.

Information Resources Management (IRM)

IRM provides a variety of systems operations services, designed to assume total or partial control and responsibility of information resources on a long-term or short-term basis for higher education institutions and government jurisdictions.

- SCT can manage, staff and support any or all aspects of a client's information systems and operations, including data center management and operations, short-term and long-range planning, user liaison and functional consulting, technical support services, application and systems software support, office automation, microcomputer maintenance and telecommunications services and network integration.
- IRM's premier offering is OnSite services, a comprehensive computing management service in which clients outsource their computer processing operation to SCT through a "public/private, or outsourcing, partnership."
- IRM now "bundles" BANNER administrative software applications with its OnSite services to provide clients with a complete solution for their information technology needs.
- SCT developed a Total Quality Management (TQM) methodology to be used as a tool for increasing client satisfaction and productivity by applying a standard approach to administration systems in order to easily identify opportunities for rightsizing and downsizing client systems.
- IRM also provides custom applications software development services for government, utilities and education. An OnSite services development team assumes full responsibility for the software development project, including the feasibility study, design, coding, testing, and implementation, using tested methodologies for project management, software engineering, and quality assurance, such as automated project control, structured techniques, and process checkpoints.
- OnSite services contracts may be either on a fixed price or time-and-materials basis and typically cover an initial period of three-to-seven years. The company's contract renewal rates, as a percent of annual revenue from contracts available for renewal, were 89%, 100% and 62% fiscal 1994, 1993 and 1992, respectively.
- SCT is providing OnSite services at 18 higher education institutions, 19 local governments and several other locations.

Major recent contract announcements have included the following:

- A five-year, \$6.4 million contract with Continental Cablevision to provide OnSite services at four Continental locations throughout the U.S.
- A 10-year, \$10 million contract with the City of Greenville (SC) for OnSite services to operate Greenville's MIS department, and help the City to transition from multiple operating platforms to more flexible, functional open systems

- A seven-year, \$13 million contract with Roosevelt University, Chicago to provide an academic and administrative systems solution combining OnSite services with the BANNER Finance, Student and Financial Aid systems
- A seven-year, \$35 million contract with Dallas County (TX) for OnSite services
- A 10-year, \$14 million contract with Weld County (CO) for OnSite services and migration from mainframe to a downsized environment
- A seven-and-one-half-year, \$7 million contract with Adams County (CO) for OnSite services
- A 10-year, \$50- million bundled agreement with the University of Medicine & Dentistry of New Jersey for OnSite services, four BANNER systems and the BANNERQuest™ Graphical User Interface (GUI)

SCT Software Group

SCT Education Systems

SCT Education Systems provides administrative applications software products to the higher education market. The division's product line was expanded during 1992 with the acquisition of IA and its IA-Plus Series of products.

The BANNER Series of administrative information management systems for colleges and universities consists of five integrated systems.

- The BANNER line incorporates the ORACLE RDBMS and supports an open systems, client/server environment. The product is portable over many platforms, including DEC, IBM, AT&T/NCR, Sun Microsystems, Sequent, Data General,

Hewlett-Packard and other UNIX-based systems.

- SCT's new BANNER 2.1 product features several enhancements to the BANNER line, including a complete GUI capability for users and support for ORACLE 7.
- BANNER systems for the higher education market include the following:
 - The BANNER Student System provides a range of administrative functions, from recruiting and registration to class schedules, records, and billing.
 - The BANNER Financial Aid System manages financial aid programs and includes such functions as tracking, budgeting, needs analysis and packaging.
 - The BANNER Alumni/Development System provides administrative support for fund-raising and development programs for colleges and universities.
 - The BANNER Finance System provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing, and budgeting.
 - The BANNER Human Resources System supports a range of human resource administration functions, including budgeting, staffing, applicant processing, EEO reporting, W-2 reporting, assignment processing, benefits administration, and payroll processing.
- BANNERQuest is a natural language query system that allows BANNER clients to access information from their administrative data base using plain English.

- There are currently nearly 400 BANNER customers in the higher education market.

IA-Plus Series is designed to meet the administrative needs of the higher education market.

- IA-Plus systems operate on large-scale IBM and DEC computers using DB2 and proprietary operating systems. A version for the IBM RS/6000 is scheduled for release during 1995.
- IA-Plus consists of five systems comprising a total of 15 modules. The systems, which may be purchased separately or together, include:
 - Student Information
 - Financial Aid
 - Financial Records
 - Human Resources
 - Alumni/Development
- There are currently more than 1,650 IA-Plus systems licensed to 561 customers.

Other products offered through SCT Education Systems include:

- VISAGE:Plus™, a graphical user interface to IA-Plus
- EDI.Smart™, electronic transcript management/delivery software
- FOCUS^R Express, an ad hoc reporting tool for BANNER and IA-Plus using the FOCUS Report Writer from Information Builders

Recent contract announcements include:

- A seven-year, \$15 million contract with the State of Texas, Department of Information Resources, allowing state

colleges and universities to license BANNER and IA-Plus

- Licensing of BANNER Student, Finance and Human Resources systems by the Monterrey Institute of Technology (the largest private institution in Mexico) and Benemerita Universidad Autonoma de Puebla (the third-largest public institution in Mexico).
- Providing 16 two-year colleges of the South Carolina Board for Technical & Comprehensive Education with IA-Plus Human Resources.
- An agreement with the Board of Regents of the University System of Georgia to make the full spectrum of BANNER software available to more than 30 state-funded colleges and universities and to assist with implementation.

SCT serves 812 higher education institutions, including 39% (610) of the 1,574 institutions having a population of over 3,000 students.

SCT Government Systems

SCT offers the BANNER Series of administrative information management software to government jurisdictions and courts.

- The BANNER line incorporates the ORACLE RDBMS and supports an open systems, client/server environment. The product is portable over many platforms, including DEC, IBM, AT&T/NCR, Sun Microsystems, Sequent, Data General, Hewlett-Packard and other UNIX-based systems.
- BANNER systems for government include:

- The BANNER Finance System provides financial data and management information in the areas of general ledger, purchasing/receiving, stores inventory, accounts payable, fixed assets, budget development, cost accounting, accounts receivable and, optionally, investment management.
- The BANNER Human Resources System supports a range of human resource administration functions, including applicant tracking, employment/compensation administration, employee relations administration, health and safety administration, benefits administration, position management, personnel services budgeting, time reporting, payroll calculation, payroll adjustments and history and tax administration.
- The BANNER Courts Management System empowers those involved in the judicial process to access information intelligently via docket management, document management, scheduling and accounts receivable capabilities.
- The BANNER Records Indexing System streamlines the records indexing process (including choice of a remote access capability) and can handle the critical areas of cash receipts and accounts receivable.
- The BANNER Occupational Tax & License System, which helps the user to maintain an accurate, well-managed tax and license system, includes functions for account maintenance, accounting, collections, inspections/audits and checks/refunds.
- The BANNER Property Tax System simplifies multiyear tax administration,

including system administration, real property administration/assessment, tax calculation, billing, collections and distributions.

- The BANNER Utility Customer Information System supports the business operations of customer account management, such as location information, customer information, billing and account history, accounts receivable, service orders, component inventory and reporting.

SCT Government Systems also provides customer service in the areas of systems integration, project management, training, specialized consulting and development and computing equipment and supplies.

SCT Government Systems has nearly 1,300 clients worldwide.

- New BANNER Courts clients include the Office of Prothonotary and Office of Register of Wills of Allegheny County (PA) Courts, Orange County (CA) Superior Court and the First Judicial District of Pennsylvania.
- Other new BANNER clients include the City of Duncanville (TX), the City of Fredericton (New Brunswick, Canada), the City of Galveston (TX), the City of Goldsboro (NC), the City of Grand Junction (CO), Metropolitan Transit Authority/Harris County (Houston, TX), Indiana Department of Natural Resources, Leon County (FL), the City of Manitowoc (WI) Public Utilities, Muskegon County (MI), Potter County (TX), the City of Raleigh (NC) and Weld County (CO).

SCT Utility Systems, Inc.

SCT Utility Systems has more than 150 customers worldwide.

- The BANNER line incorporates the ORACLE RDBMS and supports an open systems, client/server environment. The product is portable over many platforms, including DEC, IBM, AT&T/NCR, Sun Microsystems, Sequent, Data General, Hewlett-Packard and other UNIX-based systems.
- BANNER systems for utilities include:
 - The BANNER Finance System, an accrual-based system that provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing and budgeting
 - The BANNER Human Resources System, supporting a range of human resource administration functions, including budgeting, staffing, applicant processing, EEO reporting, W-2 reporting, assignment processing, benefits administration and payroll processing
 - The BANNER Utility Customer Information System, integrating billing, customer account management and related functions.

As a result of the acquisition of IntelliSource Software Group, SCT now also offers the following products to the utility market:

- Materials Management System (MMS)
- Fuels Management System (FMS)
- Work Management System (WMS)
- Procurement System

Recently added clients include North West Water, Ltd. (Warrington, England);

Asheville/Buncombe Water Authority (Asheville, NC); the City of Columbus, Ohio Public Utilities Department (Divisions of Water and Sewerage & Drainage); the City of Raleigh (NC); and the City of Richmond (VA).

SCT Manufacturing & Distribution Systems

SCT now offers the ADAGE enterprise resource planning (ERP) system to multinational users in the manufacturing and distribution industries.

- ADAGE includes 20 integrated modules targeted at hybrid manufacturing (discrete and process industries) and order fulfillment/distribution disciplines that address the sales, engineering, procurement, manufacturing, logistics, quality assurance and finance functions.
- The product, which uses a relational database management system, operate will all major server platforms, both Intel-based and UNIX, including Compaq, Data General, Digital, Hewlett-Packard, IBM, Sun and others.

Systems Integration

This new division provides information systems development, integration services and consulting within selected markets.

SCT International, Ltd.

SCT International, Ltd. is responsible for providing SCT software and consulting products and services to the utility industry in Great Britain and throughout the world.

Sample Clients

Information Resource Management—Dallas County (TX), Mohave County (AZ), Weld County (CO), Mississippi College, Fairfield University (CT), University of Medicine &

Dentistry of New Jersey, Allen County (IN), Beaver County (PA), Butte County (CA), California Institute of Technology, Charleston County (SC), City of Ft. Wayne (IN), Kent County (DE), San Juan Hospital, City Computer Center of San Juan, The George Washington University (D.C.), Norwich University (VT).

SCT Education Systems—Indiana State University (IN), Johnson County Community College (KS), Massachusetts Institute of Technology (MA), State University of New York (NY), University of Nebraska (NE), William Marsh Rice University (TX), University System of Georgia.

SCT Government Systems—City of Dayton (OH), St. Lucie County (FL), American Red Cross (Charlotte, NC), Boston Health and Hospitals (MA), City of Baton Rouge (LA), City of Pontiac (MI), Delaware River Port Authority (NJ), Allegheny County (PA), Orange County (CA).

SCT Utility Systems—Albany Water, Gas & Light Commission (GA), City of Alexandria (LA), Anoka Electric Cooperative (MN), Berea College (KY), City of Dayton (OH), Mid-Carolina Electric (SC), Water Works and Sanitary Sewer Board of the City of Montgomery (AL), Palmetto Electric Cooperative (SC), City of Poway (CA), City of Regina (Saskatchewan), Village of Schaumburg (IL), St. Lucie County (FL), City of West Palm Beach (FL), Agua de Mexico (Mexico City), North West Water, Ltd. (U.K.).

Marketing and Sales

SCT has a sales force of approximately 80 direct salespersons and support staff, of which approximately 67 sell SCT's

applications software products and 13 sell OnSite services.

SCT also has various cooperative marketing agreements with hardware and software suppliers.

Alliances

SCT is a value-added reseller of Oracle database products and derives commission revenue on ORACLE licenses.

SCT also has established marketing relationships for its BANNER series with DEC, AT&T/NCR, Sun, Data General, Hewlett-Packard and Sequent.

SCT has an agreement with Perception Technology to jointly develop voice technology capabilities for both BANNER and IA-Plus products.

Competitors

Systems operations competitors include IBM, Andersen Consulting, PRC, Computer Sciences Corporation, Electronic Data Systems, PeopleSoft and in-house data processing departments.

Within the higher education market, principal software competitors include American Management Systems and Datatel.

The local government and utility markets are highly fragmented and competition varies significantly depending on customers' computing platforms.

For finance and human resource systems, Oracle Corporation markets a system that competes with SCT's BANNER Finance and Human Resources systems.

In the area of manufacturing and distribution, competitors include SAP, QAD, Inc., Datalogix, Baan, Computer Associates (Manman/X), Cincom, JIT, Oracle, Marcam, System Software Associates and Ross Systems.

INPUT Assessment

SCT's strengths include:

- Strong BANNER product line supporting multiple operating systems and hardware platforms in multiple markets, worldwide
- Satisfied base of software and computing management customers
- Significant power providing client/server and open systems solutions to its selected markets
- Successful transition to client/server platforms for BANNER software for the higher education market

Challenges include:

- Growing mid-level services, such as systems implementation and integration
- Expanding the company's client base outside the U.S.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

July 1994

Systems & Computer Technology Corporation

Chairman,
President & CEO: Michael J. Emmi
4 Country View Road
Malvern, PA 19355
Phone: (610) 640-5175
Fax: (610) 648-7411



Status: Public
Employees: 1,500 (4/94)
Revenue: \$ 120,168,000
Fiscal Year End: 9/30/93

Key Points

- Systems & Computer Technology Corporation (SCT) is a leading provider of outsourcing services and administrative applications software to the higher education and government markets, as well as products for the utilities market.
- During 1993, SCT retained 100% of its systems operations clients and signed the largest government contract in the history of the company—a seven-year, \$35 million outsourcing deal with Dallas County (TX).
- The company claims its current customer base in the higher education markets serves about one-half of all college students in the U.S.
- SCT offers several software products for administrative applications, including BANNER[®], which supports the ORACLE[®]

relational data base management system (RDBMS) and is offered in each of the company's three markets. There are more than 650 BANNER software systems licensed to some 300 clients.

- In 1993, SCT released its BANNER Customer Information System for Utilities and signed 14 contracts for the product during the year.

Company Description

SCT provides systems operations, associated support services and applications software products to government agencies, educational institutions, and utility companies. Hardware sales are also made in conjunction with the company's BANNER software products.

SCT was founded in 1968 to provide services to the higher education market. The company has made several acquisitions since 1990 which have expanded its product offerings, market opportunities and expertise.

- The acquisition of the Moore Companies in 1990 and Mentor Information Systems in 1991, expanded SCT's offerings to the state, local and municipal government markets and not-for-profit organizations.
- The acquisition of Digital Systems in 1991 expanded SCT's offerings to the utilities industry.
- SCT acquired one of its major competitors in the higher education market in mid-1992 with the purchase of Information Associates (IA) from Dun & Bradstreet Software.

Operations and Structure

SCT is currently organized into three major areas of business as follows:

- The Information Resource Management (IRM) Division, based in Malvern (PA) with approximately 850 employees, provides systems operations, processing and professional services to higher education, government and private utilities. IRM's premier offering is OnSite services. Regional offices are in Summerville (SC), Irvine (CA) and Hato Rey (Puerto Rico).
- SCT Software Group, a newly formed organization which includes the following units:
 - Software and Technology Services (STS) Division, based in Malvern (PA) and Rochester (NY), has approximately 375 employees. STS develops, licenses, and supports SCT's applications software for higher education clients. This unit's principal offerings are the BANNER series and IA-Plus™ Series of products. Regional offices are in Atlanta (GA), Dallas (TX), Irvine and San Diego (CA) and Reston (VA).
 - SCT Public Sector, Inc., based in Lexington (KY), has approximately 170 employees. This division provides applications software, professional services, hardware and supplies for state, local and municipal governments, courts and not-for-profit organizations. Primary products include BANNER, MONITOR™, SPECTRUM™ and PSAS™. Regional offices are in Atlanta (GA), Baton Rouge (LA), Concordia (KS), Irvine (CA), Malvern (PA) and Palm Beach (FL).
 - SCT Utility Systems, Inc., based in Columbia (SC), has approximately 75 employees. This division provides customer information, human resource, finance and billing software for utility companies, electric cooperatives, and municipal utilities. Primary products are

BANNER, MONITOR, REACT™ and RESPONSE™.

- SCT International, Ltd. was formed in early 1994 to provide SCT software and consulting to the utility industry in Great Britain and throughout the world.

Company Strategy

SCT's goal is to be the leading provider of open systems solutions to customers in its three vertical markets by providing both systems operations services and applications software.

In the systems operations/outsourcing market, SCT's strategy is to increase sales opportunities by bundling its applications software with its OnSite services to provide prospective clients with a total information system solution.

- Drawing on the company's experience with governmental utility billing systems, SCT also hopes expand its systems operations services to major U.S. and international utility companies.
- SCT has plans to steadily grow in its mid-level services, such as systems implementation and integration for the higher education, government jurisdiction and public and private utility markets.

In the higher education software market, SCT is committed to providing advanced administrative systems for both client/server and centralized computing environments.

- SCT continues to evolve its BANNER Series of products for this market and is demonstrating its support for client/server with planned release of BANNER 2 during 1994. BANNER 2 supports ORACLE 7 and will take advantage of new ORACLE tools to offer graphical user interfaces. New operating systems supported

by the product include DEC's Alpha AXP and Sun's Solaris.

- SCT has successfully integrated the IA operations into the STS Division. The IA-Plus Series product line supports centralized computing environments through five integrated systems.
- SCT will continue to expand its higher education client base outside the U.S.
- Software support is a primary goal. During 1993, over 93% of previous IA clients and over 99% of BANNER clients renewed their annual maintenance contracts with SCT.

In the public sector market, SCT's mission is to provide administrative, revenue-enhancing and criminal justice systems through mission-critical software and customer support.

- SCT offers multiple operating systems and hardware platforms for its products, providing a flexible migration path for its clients and supporting the "re-engineering" of government.
- The company is devoting resources to continually enhancing its BANNER Series of products, which are based on client/server technology and the ORACLE RDBMS. Existing systems include finance, human resources, courts case management, records indexing, occupational tax and license, property tax and license, and utility customer information.

In the utilities market, SCT's mission is to meet the administrative needs of utilities providing gas, electric, water, wastewater, refuse and other services.

- With the introduction of the BANNER Utility Customer Information System—an open system RDBMS customer service system—SCT now provides a solution that can be scaled to a wide range of utilities—from smaller midrange utilities to larger, multimillion-consumer operations.
- SCT intends to expand into international markets and is focusing on large overseas utility organizations.

Financials

SCT's fiscal 1993 revenue reached \$120.2 million, a 32% increase over fiscal 1992 revenue of \$90.9 million.

- Net income for the year was \$9.6 million, compared with a net loss of nearly \$2.3 million for fiscal 1992. Results for 1992 included a \$7.7 million non-recurring charge for purchased research and development activity related to the acquisition of IA in June 1992.

- A five-year financial summary follows:

Systems & Computer Technology Corporation Five-Year Financial Summary (\$ Millions, except per share data)

Item	Fiscal Year				
	9/93	9/92	9/91	9/90	9/89
Revenue	\$120.2	\$90.9	\$65.4	\$46.1	\$42.6
• Percent change from previous year	32%	39%	42%	8%	N/A
Income (loss) before taxes	\$11.2	\$(1.6)	\$5.2	\$(1.7)	\$3.2
• Percent change from previous year	800%	(131%) (a)	406%	(153%)	N/A
Net income (loss) (b)	\$9.6	\$(2.3)	\$4.7	\$(1.9)	\$3.2
• Percent change from previous year	517%	(149%)	(347%)	(159%)	N/A
Earnings (loss) per share	\$0.74	\$(0.19)	\$0.38	\$(0.16)	\$0.26
• Percent change from previous year	489% (c)	(150%)	338%	(162%)	N/A

(a) Includes a \$7.7 million charge for purchased research and development in connection with the acquisition of Information Associates in 1992.

(b) Includes net operating loss carryforwards of \$2.9 million in fiscal 1993, \$180,000 in fiscal 1992, \$1.7 million in fiscal 1991, \$200,000 in fiscal 1990, and \$1.3 million in fiscal 1989.

(c) Fully diluted.

Revenue Analysis by Product Line:

Approximately 45% of SCT's fiscal 1993 revenue was derived from systems operations, 33% from

software and hardware sales and 22% from maintenance and enhancement services. A three-year summary of source of revenue follows:

Systems & Computer Technology Corporation
Three-Year Source of Revenue Summary
 (\$ Millions)

Product/Service	Fiscal Year					
	9/93		9/92		9/91	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Systems operations	\$53.7	45%	\$43.7	48%	\$33.0	50%
Software and hardware sales	40.0	33%	33.4	37%	26.4	40%
Maintenance and enhancements	26.0	22%	13.1	14%	4.9	8%
Interest and other	0.5	—	0.7	1%	1.1	2%
Total	\$120.2	100%	\$90.9	100%	\$65.4	100%

SCT management attributes the company's fiscal 1993 results to the following:

- Systems operations revenues rose 23% to \$53.7 million due primarily to the addition of contracts with the University of Pacific, Dallas County and the University of Medicine and Dentistry of New Jersey, which commenced in October and November 1992 and July 1993, respectively.
- Software and hardware sales and services revenue increased 20% to nearly \$40 million due primarily to the acquisition of IA and continued demand for BANNER products. Software for higher education achieved record growth of 59% during the year.
- Maintenance and enhancements revenue rose 99% to over \$26 million during fiscal 1993 due primarily to the IA acquisition.

In September 1993, SCT completed a public offering of \$34.5 million convertible subordinated debentures, due in 2003. The debentures are convertible by holders into SCT

common stock at \$15 per share. Net proceeds of \$32.9 million from the offering allowed SCT to repay over \$15 million in long-term debt and to set aside cash for future corporate operations and possible acquisitions.

Interim Results: Revenue for the six months ending March 31, 1994 reached \$69.9 million, a 25% increase over \$55.8 million for the same period in 1993. Net income rose over 59%, from \$3.0 million to nearly \$4.8 million.

Market Financials

SCT's fiscal 1993 revenue was derived from educational institutions, utilities, and government. Approximately 63% (\$75.7 million) came from higher education, 31% (\$37.3) from local government, 3.5% (\$4.2 million) from utility companies and the remaining 2.5% (\$3 million) from other markets.

The markets for SCT's products and services include:

- Higher education: Systems operations and applications software is marketed to colleges, universities, and other higher education institutions, including proprietary schools. Institutions with enrollments greater than 1,000 students (of which there are approximately 2,200) represent SCT's target market.
- Local government: SCT markets its BANNER Series of administrative software to county and municipal governments of all sizes.
- Utilities: SCT's target utility market includes approximately 2,500 public and private utilities serving from 50,000 to 3 million consumers.

Geographic Markets

Virtually 100% of SCT's fiscal 1993 revenue was derived from the U.S. The company has several clients outside the U.S., including sites in the Caribbean and the U.K.

Acquisitions

In June 1992, SCT acquired Information Associates, Inc. (IA) of Rochester (NY) from Dun & Bradstreet Software for \$22.5 million.

- IA, a leading supplier of DEC and IBM administrative software to the higher education market, had 1991 revenue of approximately \$30 million, with maintenance revenue of more than \$12 million.
- IA had an installed base of more than 500 colleges and universities at the time of the acquisition. Its products are now available through SCT's Software & Technology Services Division.

Employees

As of June 30, 1994, SCT had approximately 1,500 employees, of which approximately 325 are resident at the company's corporate offices, with the remainder located throughout SCT's various offices and client sites.

These employees are segmented as follows:

Information Resource Management	850
SCT Software Group	
- Software & Technology Services	375
- SCT Public Sector, Inc.	170
- SCT Utility Systems, Inc.	75
	620
SCT International, Ltd. and other.....	30
	1,500

Key Products and Services

SCT offers a range of products and services through three distinct operating groups as described below.

Information Resources Management (IRM):

IRM provides a variety of systems operations services, designed to assume total or partial control and responsibility of information resources on a long-term or short-term basis for higher education institutions and government jurisdictions.

- SCT can manage, staff and support any or all aspects of a client's information systems and operations, including data center management and operations, short-term and long-range planning, user liaison and

functional consulting, technical support services, application and systems software support, office automation, microcomputer maintenance and telecommunications services and network integration.

- IRM's premier offering is OnSite services, a comprehensive computing service in which clients outsource their computer processing operation to SCT through a "public/private partnership."
- IRM now bundles its BANNER administrative software applications with its systems operations services to provide clients with a complete solution for their computing needs.
- SCT developed the Total Quality Management (TQM) methodology to be used as a tool for increasing client productivity by applying a standard approach to administration systems in order to easily identify opportunities for rightsizing and downsizing client systems.
- IRM also provides custom applications software development services for government and education. An OnSite development team assumes full responsibility for the software development project, including the feasibility study, design, coding, testing, and implementation, using tested methodologies for project management, software engineering, and quality assurance, such as automated project control, structured techniques, and process checkpoints.
- OnSite contracts may be either on a fixed price or time-and-materials basis and typically cover an initial period of three to

seven years. The company's contract renewal rates, as a percent of annual revenue from contracts available for renewal, were 100%, 62% and 90% for fiscal 1993, 1992 and 1991, respectively.

- SCT is providing OnSite services at 17 higher education institutions, 22 local governments and several other locations.

Major contract announcements include the following:

- A seven-year, \$13 million contract with Roosevelt University, Chicago to provide an academic and administrative systems solution combining OnSite services with the BANNER Finance, Student and Financial Aid systems
- A seven-year, \$35 million contract with Dallas County (TX) for OnSite services
- A seven-year, \$11 million contract with Mohave County (AZ) for OnSite services and migration from mainframe computer to downsized hardware environments
- A ten-year, \$14 million contract with Weld County (CO) for OnSite services and migration from mainframe to a downsized environment
- A seven-and-one-half-year, \$7 million contract with Adams County (CO) for OnSite services
- A ten-year, \$50- million bundled agreement with the University of Medicine & Dentistry of New Jersey for OnSite services, four BANNER systems and the BANNERQuest™ Graphical User Interface (GUI)

*SCT Software Group:***Software & Technology Services (STS)**

STS provides administrative applications software products to the higher education market. The division's product line was expanded during 1992 with the acquisition of IA and its IA-Plus Series of products.

The BANNER Series of administrative information management systems for colleges and universities consists of five integrated systems.

- The BANNER line incorporates the ORACLE RDBMS and supports an open systems, client/server environment. The product is portable over many platforms, including DEC, IBM, AT&T/NCR, Sun Microsystems, Sequent, Data General, Hewlett-Packard, and other UNIX-based systems.
- SCT's new BANNER 2 product features several enhancements to the BANNER line, including a complete GUI capability for users and support for ORACLE 7.
- BANNER systems for the higher education market include the following:
 - The BANNER Student System provides a range of administrative functions, from recruiting and registration to class schedules, records, and billing.
 - The BANNER Financial Aid System manages financial aid programs and includes such functions as tracking, budgeting, needs analysis and packaging.
 - The BANNER Alumni/Development System provides administrative support

for fund-raising and development programs for colleges and universities.

- The BANNER Finance System provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing, and budgeting.
 - The BANNER Human Resources System supports a range of human resource administration functions, including budgeting, staffing, applicant processing, EEO reporting, W-2 reporting, assignment processing, benefits administration, and payroll processing.
 - BANNERquest (formerly known as IntelliQuest) is a natural language query system that allows BANNER clients to access information from their administrative data base using plain English. BANNERquest uses reasoning-based technology from Natural Language Inc.
 - There are currently more than 330 BANNER customers in the education market.
- IA-Plus Series is designed to meet the administrative needs of the higher education market.
- IA-Plus systems operate on large-scale IBM and DEC computers using proprietary operating systems.
 - IA-Plus consists of five systems comprising a total of 15 modules. The systems, which may be purchased separately or together, include:

- Student Information
 - Financial Aid
 - Financial Records
 - Human Resources
 - Alumni/Development
- There are currently more than 1,650 IA-Plus systems licensed to 561 customers.
- Other products offered through STS include:
- VISAGE:IA, a graphical user interface to IA-Plus
 - EDI.Smart™, electronic transcript management/delivery software
 - FOCUS^R Express, an ad hoc reporting tool for BANNER and IA-Plus using the FOCUS Report Writer from Information Builders.

Major contract announcements include:

- An agreement with the Board of Regents of the University System of Georgia to make the full spectrum of BANNER software available to more than 30 state-funded colleges and universities and to assist with implementation.

SCT Public Sector, Inc.

SCT offers the BANNER Series of administrative information management software to government jurisdictions.

- The BANNER line incorporates the ORACLE RDBMS and supports an open systems, client/server environment. The product is portable over many platforms, including DEC, IBM, AT&T/NCR, Sun Microsystems, Sequent, Data General,

Hewlett-Packard and other UNIX-based systems.

• BANNER systems for government include:

- The BANNER Finance System provides financial data and management information in the areas of general ledger, purchasing/receiving, stores inventory, accounts payable, fixed assets, budget development, cost accounting, accounts receivable and, optionally, investment management.
- The BANNER Human Resources System supports a range of human resource administration functions, including applicant tracking, employment/compensation administration, employee relations administration, health and safety administration, benefits administration, position management, personnel services budgeting, time reporting, payroll calculation, payroll adjustments and history and tax administration.
- The BANNER Series for Courts empowers those involved in the judicial process to access information intelligently via docket management, document management, scheduling and accounts receivable capabilities.
- The BANNER Records Indexing System streamlines the records indexing process (including choice of a remote access capability) and can handle the critical areas of cash receipts and accounts receivable.
- The BANNER Occupational Tax & License System, which helps the user to

maintain an accurate, well-managed tax and license system, includes functions for account maintenance, accounting, collections, inspections/audits and checks/refunds.

- The BANNER Property Tax System simplifies multiyear tax administration, including system administration, real property administration/assessment, tax calculation, billing, collections and distributions.
- The BANNER Utility Customer Information System supports the business operations of customer account management, such as location information, customer information, billing and account history, accounts receivable, service orders, component inventory and reporting.

SCT Public Sector also provides customer service in the areas of systems integration, project management, training, specialized consulting and development and computing equipment and supplies.

Major contract announcements include:

- An agreement with the City of Grand Junction (CO) (pop. 28,000) for BANNER Finance, Human Resources, Courts, Utility Customer Information System (CIS) and BANNERQuest software and FOCUS ReportWriter
- An agreement with the City of Galveston (TX) (pop. 65,000) for BANNER Finance, Human Resources, Courts, Utility CIS, BANNERQuest and FOCUS ReportWriter

- An agreement with the City of Goldsboro (NC) (pop. 45,000) for BANNER Finance, Human Resources and Utility CIS
- An agreement with the Indiana Department of Natural Resources for BANNER Finance, BANNERQuest, FOCUS ReportWriter and related hardware and services, serving 25 divisions and departments within the organization
- An agreement with the Office of the Clerk of Circuit Court of Leon County (FL) for BANNER Finance, Human Resources, BANNERQuest and FOCUS ReportWriter

SCT Utility Systems

SCT Utility Systems has more than 150 customers worldwide.

The BANNER Series of systems for utilities consists of three integrated systems.

- The BANNER line incorporates the ORACLE RDBMS and supports an open systems, client/server environment. The product is portable over many platforms, including DEC, IBM, AT&T/NCR, Sun Microsystems, Sequent, Data General, Hewlett-Packard and other UNIX-based systems.
- BANNER systems include:
 - The BANNER Finance System, an accrual-based system that provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing and budgeting
 - The BANNER Human Resources System, supporting a range of human

resource administration functions, including budgeting, staffing, applicant processing, EEO reporting, W-2 reporting, assignment processing, benefits administration and payroll processing

- The BANNER Utility Customer Information System, integrating billing, customer account management and related functions.

Major contract announcements include:

- A two-year applications software and services contract with North West Water, Ltd. (Warrington, England)—the world's fourth largest water and wastewater company and the second largest in England serving three million households—to provide BANNER Utility CIS and OnSite consulting services at the water utility's U.K. headquarters. The arrangement is expected to result in one of the largest client/server customer service implementations ever conducted.

SCT International, Ltd.:

SCT International, Ltd. is responsible for providing SCT software and consulting products and services to the utility industry in Great Britain and throughout the world.

Clients

Information Resource Management—Dallas County (TX), Mohave County (AZ), Weld County (CO), Mississippi College, Fairfield University (CT), University of Medicine & Dentistry of New Jersey, Allen County (IN), Beaver County (PA), Butte County (CA), California Institute of Technology, Charleston County (SC), City of Ft. Wayne

(IN), Kent County (DE), San Juan Hospital, City Computer Center of San Juan, The George Washington University (WA), Norwich University (VT).

Software & Technology Services—Indiana State University (IN), Johnson County Community College (KS), Massachusetts Institute of Technology (MA), State University of New York (NY), University of Nebraska (NE), William Marsh Rice University (TX), University System of Georgia.

SCT Public Sector—City of Dayton (OH), St. Lucie County (FL), American Red Cross (Charlotte, NC), Boston Health and Hospitals (MA), City of Baton Rouge (LA), City of Pontiac (MI), Delaware River Port Authority (NJ), Allegheny County (PA), Orange County (CA).

SCT Utility Systems: Albany Water, Gas & Light Commission (GA), City of Alexandria (LA), Anoka Electric Cooperative (MN), Berea College (KY), City of Dayton (OH), Mid-Carolina Electric (SC), Water Works and Sanitary Sewer Board of the City of Montgomery (AL), Palmetto Electric Cooperative (SC), City of Poway (CA), City of Regina (Saskatchewan), Village of Schaumburg (IL), St. Lucie County (FL), City of West Palm Beach (FL), Agua de Mexico (Mexico City), North West Water, Ltd. (U.K.).

Marketing and Sales

SCT has a sales force of approximately 88 direct salespersons and support staff, of which approximately 73 sell SCT's applications software products and 15 sell OnSite services.

SCT also has various cooperative marketing agreements with hardware and software suppliers, as described below.

Alliances

SCT is a value-added reseller of Oracle data base products and derives commission revenue on ORACLE licenses.

SCT also has established marketing relationships for its BANNER series with DEC, AT&T/NCR, Sun, Data General, Hewlett-Packard and Sequent.

SCT has an agreement with Perception Technology to jointly develop voice technology capabilities for both BANNER and IA-Plus products.

Competitors

Systems operations competitors include IBM, Andersen Consulting, PRC, Computer Sciences Corporation, Electronic Data Systems, and in-house data processing departments

Within the higher education market, principal software competitors include American Management Systems and Datatel.

The local government and utility markets are highly fragmented and competition varies significantly depending on the customers' computing platforms.

For finance and human resource systems, Oracle Corporation markets a system that competes with SCT's BANNER Finance and Human Resources systems.

INPUT Assessment

SCT's strengths include:

- Strong BANNER product line supporting multiple operating systems and hardware platforms
- Satisfied base of software and computing management customers
- Significant power providing client/server and open systems solutions to its selected markets

Challenges include:

- Successful transition to client/server platforms for BANNER software for the higher education market
- Growing mid-level services, such as systems implementation and integration
- Expanding the company's client base outside the U.S.

COMPANY PROFILE

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

Great Valley Corporate Center
4 Country View Road
Malvern, PA 19355
(215) 647-5930

Michael J. Emmi, Chairman and CEO
Public Corporation, OTC
Total Employees: 729 (9/88)
Total Revenue, Fiscal Year End
9/30/88: \$37,594,000

The Company

Systems & Computer Technology Corporation (SCT), founded in 1968, provides application software products and systems integration professional services, including custom software development, telecommunication consulting, information resources, and facilities management, to government agencies and educational institutions.

Fiscal 1988 revenue was \$37.6 million, an 11% decrease from fiscal 1987 revenue of \$42 million. Net losses for the year were \$3.5 million, compared with net income of \$100,000 for fiscal 1987. A five-year financial summary follows:

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

ITEM	FISCAL YEAR				
	9/88	9/87	9/86	9/85	9/84
Revenue	\$37,594	\$42,037	\$41,523	\$47,368	\$46,411
• Percent Increase (decrease) from previous year	(11%)	1%	(12%)	2%	10%
Income (loss) before taxes	\$(3,331)	\$(1,460)	\$(23,377)	\$(264)	\$7,450
• Percent Increase (decrease) from previous year	(128%)	94%	*	(104%)	(46%)
Net income (loss)	\$(3,480)	\$100	\$(14,810)	\$456	\$4,441
• Percent Increase (decrease) from previous year	*	101%	*	(90%)	(38%)
Earnings (loss) per share	\$(0.26)	\$0.01	\$(1.08)	\$0.03	\$0.33
• Percent Increase (decrease) from previous year	*	101%	*	(91%)	(39%)

* Percent change exceeds 1,000%

(a) Includes \$4.9 million (less a \$1 million reserve), as a settlement of an insurance claim with former company officers..

(b) Includes a \$15.4 million provision for the settlement of the class action and other litigation and related expenses.

SCT management attributes the company's financial results to the following:

- Excluding interest, other income, and the \$3.9 million net insurance settlement recorded in fiscal 1987, operating revenue in fiscal 1988 decreased 1% from fiscal 1987, and fiscal 1987 decreased 6.6% from fiscal 1986. These decreases are mainly the result of phase-outs of certain Information Resource Management contracts during the past two fiscal years.
- Software license and commission revenues from third-party software vendors increased 119% from fiscal 1987 to fiscal 1988 and 86% from fiscal 1986 to fiscal 1987. Since 1985, SCT has

invested \$8.9 million in research and development expenditures for its software products. During fiscal 1988 new applications were introduced to expand its BANNER Series product line.

- Net losses in fiscal 1988 were the result of lower revenues combined with continuing investments in product development (\$3.1 million in fiscal 1988). Payroll costs were reduced in fiscal 1988 as the result of contract phasebacks and reductions in work force.

Revenue for the three months ending December 31, 1988 was \$11.5 million and includes a net gain of approximately \$1.9 million from the settlement of litigation with former officers of the company.

- Excluding this gain, first quarter revenue was \$9.7 million -- essentially flat as compared to the same quarter a year ago -- and earnings before taxes were \$317,000, an improvement of \$903,000 from losses of \$586,000 for the same period in 1987.
- Net income for the period reached nearly \$2.2 million and includes \$870,000 from utilization of available net operating loss carryforwards.

SCT is currently organized into two operating divisions as follows:

- The Information Resource Management (IRM) division provides systems integration services, including management and staffing operations for the information resources (computing, office automation, telecommunications) of educational institutions and governments. This division also includes SCT's custom software development and technical consulting services.
- The Software and Technology Services division incorporates SCT's packaged application software products and telecommunications consulting services for education and government.

Recent marketing agreements announced by SCT include the following:

- In March 1988, SCT signed as a systems integrator for the government and education markets with Hewlett-Packard. As an HP systems integrator, SCT will combine HP hardware and software with its custom programming services, market

expertise, and facilities management capabilities to create complete systems for state and local governments, schools, and other institutions.

- In November 1988, SCT announced it had signed a two-year joint marketing agreement with Sequent Computer Systems to offer SCT's BANNER™ Series software on Sequent's Symmetry computers.

As of September 30, 1988, SCT employed 729 persons. As Of December 1988, SCT had 707 employees.

Current SCT competitors, by product/service area, include:

- Professional services: Planning Research Corporation, Computer Sciences Corporation, Electronic Data Systems, and in-house data processing departments.
- Software products: American Management Systems, Management Science America, and Integral Systems, Inc.

Key Products and Services

Approximately 84% of SCT's fiscal 1988 revenue was derived from professional services and 12% was from application software product licenses and commissions. The remaining 4% was from interest and other sources. A three-year source of revenue summary, as provided by SCT, follows:

**SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	9/88		9/87		9/86	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Professional services	\$31.4	84%	\$34.2	81%	\$37.8	91%
Software license fees	1.8	4%	1.1	3%	2.3	5%
Commissions	0.8	2%	0.2	1%	--	--
Insurance settlement	--	--	3.9	9%	--	--
Interest, primarily on short-term investments	1.6	4%	1.6	4%	2.7	6%
Other revenues	--	--	0.3	1%	--	--
TOTAL	\$37.6	100%	\$42.0	100%	\$41.6	100%

SCT provides a range of professional services to educational institutions and local governments.

- Under Information Resource Management (IRM) contracts, SCT provides planning, management, staffing, and operating capabilities for its clients' information resources--the data processing center, management information systems, office automation systems, and telecommunications systems.
- SCT personnel are located at a client's site to manage and/or staff any combination of these functions. Responsibilities can include data center operations, administrative systems development, budgeting control, long-term planning, user liaisons, training, hardware procurement, technical and operations support, data center design and implementation, and integrated communications services.
- IRM contracts typically cover a three-to-five-year period, with an option to renew. As of September 30, 1988, SCT had 36 long-term contracts in effect for management and staffing services.

- Some of the highlights of SCT's IRM business in fiscal 1988 include the following:
 - During fiscal 1988, four new long-term clients for IRM services were added. In addition, eight of the eleven services clients scheduled for renewal in 1988 signed new contracts with SCT -- a 73% renewal rate.
 - The City of Ft. Wayne (IN) signed a six-year contract for SCT to manage and staff the City's data processing and telecommunications functions.
 - Byron Health Center contracted with SCT for a needs assessment, master plan, and user liaison/support. SCT will be evaluating the Center's administrative information requirements, preparing an information system master plan, and helping the Center select, implement, and support a new administrative system.
 - Dowling College, located in Oakdale (NY), signed a seven-year contract for the staffing and management of the college's computing facilities and other information systems. Dowling College is also an SCT software client.
 - Kent County (DE) signed a five-year contract for SCT to develop a long-range computing master plan, provide systems analysis and programming resources to support new system development, improve computer literacy and training for County employees, and manage the day-to-day operations of the County's computer center.
 - The following clients renewed their on-site services agreements during fiscal 1988: Delaware County Community College (PA), Cuyahoga Community College (Cleveland, OH), San Diego Community College District, New Jersey Institute of Technology, Puerto Rico Department of Health, Northampton County (PA), Lake County (IN), and the City of San Juan (PR) Municipal Hospital.
- SCT also provides custom applications software development services for government and education. An on-site development team assumes full responsibility for the software development project, including the feasibility study, design, coding, testing, and implementation, using tested methodologies for project management, software engineering, and quality assurance, such as automated project control, structured techniques, and process check points.

- In the area of systems integration services for court systems, SCT is supporting the 10th Judicial Circuit Criminal Justice Board of Florida and has provided consulting and design services for Florida's 8th and 20th Judicial Circuits.

SCT provides packaged software and telecommunications planning and implementation to higher education and government through the Software and Technology Services division. SCT's application software products automate the administrative functions of education and government to help control costs, increase productivity and improve the quality of services, and to provide decision support information for executives and administrators.

- The BANNER™ Series, introduced in September 1987, is designed for colleges, universities, and government jurisdictions. The product runs on DEC VAX and IBM mainframe computers, using the ORACLE^R relational data base management system and SQL. The software ranges in price from \$30,000 to \$250,000.
 - The BANNER Student System for higher education provides a range of administrative functions, from recruiting and registration, to class schedules, records, and billing.
 - The BANNER Finance System for higher education and government, released in the first quarter of fiscal 1989, provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing, and budgeting.
 - The BANNER Alumni/Donor Development System, introduced in the fourth quarter of fiscal 1988, provides administrative support for fund-raising and development programs for colleges and universities.
 - A BANNER Human Resources System for education and government is currently under development.
- The SYMMETRY™ Series, introduced in February 1987, addresses the student, financial, human resource, and alumni administrative information needs of higher education, and the financial and human resource information requirements of government jurisdictions.

- The products operate in the IBM mainframe environment, using the SUPRATM relational data base management system from Cincom Systems and range in price from \$45,000 to \$150,000.
- SYMMETRY-ISIS, the Integrated Student Information System, covers such administrative functions as registration, course catalog, class schedules, and student billing.
- SYMMETRY-IFIS, the Integrated Financial Information System, includes financial operations, accounts payable, and budgeting.
- SYMMETRY-HRIS, the Human Resources Information System, maintains personnel, time sheet, and payroll information for employees as well as job classification, budget, and control information for human resources management.
- SYMMETRY-ADD, the Alumni & Donor Development System, maintains a data base of alumni, corporations, foundations, donors, prospects, and other fund-raising sources and allows the user to create targeted mailings to prospects based on giving history, affiliations, and personal interest.
- The 4D Series of software products for higher education institutions run on IBM and compatible mainframes using Cullinet's IDMS/R relational data base management system.
 - In May 1988, SCT announced ISIS (Integrated Student Information System)-4D which tracks a range of integrated applicant and student administrative functions, such as recruiting, admissions, academic history and transcript processing, registration, catalog and course scheduling, grade reporting, financial aid, fee assessment and collection, student housing, and faculty assignments. ISIS-4D is installed at six universities, including five that assisted SCT in the development of the system.
 - SCT is currently developing FIMS-4D, a financial information management system.
- SCT provides additional administrative information systems as follows:
 - A student information system under the ADABAS data management system.

- Honeywell DM-IV administrative information systems for higher education and government.
- A Civil Court Information System.
- A Criminal Court Information System.
- Licenses for SCT's microcomputer-based application software products increased 107% during fiscal 1988. The products, which attracted more than 30 new clients during the year, include the following:
 - PCESTTM is a student information system for smaller colleges, universities, and private career schools.
 - PELL+ is a system that enables educational institutions to access and exchange data with the U.S. Department of Education's computerized Pell Grant Electronic Data Exchange Program for financial aid processing.

Industry Markets

Approximately 60% of SCT's fiscal 1988 revenue was derived from educational institutions, and 40% was from government.

The markets for SCT's products and services include:

- Colleges, universities, and other educational institutions, including proprietary schools.
- State and local government, the federal government, and federal agencies.
- Educational, trade, and business associations.

Geographic Markets

One hundred percent of SCT's fiscal 1988 revenue was derived from the U.S. and Puerto Rico.

SCT maintains regional offices in Irvine (CA), Rockville (MD), and Hato Rey (Puerto Rico).

Computer Hardware

SCT maintains an IBM 4381 Model 2 mainframe and a DEC MicroVAX at its headquarters for software research and development.

COMPANY BRIEF

Cross Industry: Accounting

Sysgen, Inc.

P.O. Box 13707

Research Triangle Park, NC 27709-3707

(919) 361-1914

CEO: J. F. Jennings, President

Private Company

Founded: 1976

Employees: 30

Revenue (FYE 12/31/86): \$2 million*

The Company: Sysgen provides financial accounting software for the IBM System/38 minicomputer

Sources of Revenue:

- Application Software (100%)

Key Products:

- Application Software (Utilizes the IBM System/38)
 - The 38/Accountant modules include General Ledger/Financial Reporting/Ratio Analysis, Accounts Payable/Cash Management, Payroll/Cash Management, Accounts Receivable, Fixed Assets, and Purchase Order

Industry Markets:

- Cross industry (100%)

Geographic Markets:

- U.S. (95%)
- Canada (5%)
- Sales Offices: Durham, Raleigh, Research Triangle Park, and Chapel Hill (NC).

*INPUT estimate

December 1986



COMPANY PROFILE

SYSTEMS CENTER, INC.

(formerly VM Software, Inc.)
1800 Alexander Bell Drive
Reston, VA 22091
(703) 264-8000

Robert E. Cook, Chairman and CEO
John J. Barry III, President and COO
Public Corporation, NYSE
Total Employees: 381
Total Revenue, Fiscal Year End
12/31/88: \$51,683,000

The Company

Systems Center, Inc. was founded in 1981 as VM Software, Inc. to develop, market, and support systems software products for IBM's VM operating environment. As the result of internal development and acquisitions, the company currently markets and supports four systems software product lines, as follows:

- VM Software products allow users of IBM's VM operating system to manage and control their data processing resources and services more efficiently. These products represent the original business of VM Software, Inc. and remain Systems Center's major product line.
- Network DataMover^R products facilitate the movement of files among multiple-computer operating environments. These products were acquired in October 1988 with the acquisition of The Systems Center, Inc.
- Relational Database products augment the use of IBM's SQL/DS and DB2 data base management systems. This product line was introduced by VM Software in 1987 and expanded in February 1989 with the acquisition of DB View, Inc.
- Network Administration products provide status information and control facilities for administrators of IBM SNA networks. These products will be available from Systems Center in 1989 under a ten-year exclusive marketing agreement with International Business Link, Inc.

In February 1989, the company changed its name from VM Software, Inc. to Systems Center, Inc. in order to better reflect its expanding products and markets. In October 1988, the company's common stock moved from trading on the over-the-counter market to the New York Stock Exchange.

Systems Center's 1988 net revenue reached \$51.7 million, a 44% increase over 1987 revenue of \$36.0 million. Net income rose 85%, from \$4.0 million in 1987 to \$7.4 million in 1988. In the five-year summary that follows, financials have been restated to reflect the acquisition of The Systems Center, Inc., which was accounted for as a pooling of interests.

**SYSTEMS CENTER, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	1988	1987	1986	1985	1984
Net revenue (a) • Percent increase from previous year	\$51,683 44%	\$35,996 15%	\$31,307 59%	\$19,735 68%	\$11,759 N/A
Income (loss) before taxes and extraordinary item • Percent increase (decrease) from previous year	\$10,254 88%	\$5,467 (31%)	\$7,873 151%	\$3,133 242%	\$(2,200) N/A
Net income (loss) (b) • Percent increase (decrease) from previous year	\$7,409 85%	\$4,007 (15%)	\$4,722 445%	\$866 124%	\$(3,563) N/A
Earnings (loss) per share • Percent increase (decrease) from previous year	\$0.98 81%	\$0.54 (16%)	\$0.64 392%	\$0.13 119%	\$(0.68) N/A

- (a) After deducting provisions for returns of approximately \$1 million, \$3.6 million, \$2.8 million, \$1.6 million, and \$2 million for 1988, 1987, 1986, 1985, and 1984, respectively.
- (b) Includes \$420,072, \$203,751, and \$59,669 for 1988, 1987, and 1986, respectively, from The Systems Center, Inc.'s utilization of net operating loss carryforward.

Systems Center management attributes revenue growth to the following:

- Net software product revenues (U.S. and international) increased over 44% (\$11.3 million) during 1988. Approximately 83% (\$9.3 million) of the increase was attributed to growth in revenues generated from the company's traditional VM product line. The remaining 17% (\$2 million) of the increase was from growth related to the Network DataMover product line.

- Net product support and enhancement revenues (U.S. and international) increased nearly 42% (\$4.4 million) during 1988. Approximately 83% (\$3.6 million) of the increase was attributed to the company's traditional VM product line and 17% (\$0.8 million) was attributed to the Network DataMover product line.
- During 1988, the company continued to experience an increased demand for its products in foreign markets, primarily Western Europe. Net international revenues from software products and product support and enhancement services rose 25% (\$6.9 million) during 1988. Of the increase, approximately 88% (\$6 million) was attributed to growth in unit product licenses of VM products by Systems Center's wholly owned subsidiaries in the U.K., West Germany, and France and to growth in European product support and enhancement revenues. The remaining 12% (\$0.9 million) was attributed to increased sales of Network DataMover products in Western Europe.
- Revenue growth in 1987 was attributed to a 73% (\$4.4 million) increase in product support and enhancement revenues and a slight increase in revenue from the Network DataMover product line.

Operating expenses were \$42.3 million (82% of revenue) in 1988, \$31.2 million (87% of revenue) in 1987, and \$24.1 million (77% of revenue) in 1986.

- During 1986 and 1987, the company made several changes to its foreign operations, including the hiring of new personnel, the implementation of new management procedures, and the establishment of wholly owned subsidiaries in place of agent representatives in the U.K., West Germany, and France.
- These expenses increased during 1988 due to increases in overall domestic and foreign staffing; merger and acquisition costs associated with The Systems Center, Inc. and marketing rights to products developed by International Business Link, Inc.; increased overhead; and increased costs related to the growth of the company's foreign subsidiaries.

Recent acquisitions made by Systems Center include the following:

- In February 1989, Systems Center acquired DB View, Inc. of Waltham (MA) for approximately \$2.5 million plus contingent

payments of up to \$1.4 million based on future revenues derived from DB View's products. The acquisition will be accounted for as a purchase.

- DB View develops, markets, and supports systems software products that are designed to enhance IBM's DB2 data base management system.
- DB View had approximately 20 employees and 1988 revenue of approximately \$2 million. Approximately 100 software licenses for DB View's products became assignable to Systems Center in connection with the acquisition of DB View.
- The operations of DB View have been merged into Systems Center's Relational Database Products Division.
- In October 1988, Systems Center exchanged approximately 1.1 million shares of its common stock for all of the outstanding common and preferred stock of The Systems Center, Inc. (TSCI) of Irving (TX). The merger was accounted for as a pooling of interests.
- TSCI develops, markets, and supports the Network DataMover line of systems software products.
- TSCI had approximately 50 employees at the time of the acquisition. For the nine months ending September 30, 1988, TSCI had revenue of \$5.5 million and net income of nearly \$1.1 million. TSCI's revenues and net income (losses) were \$5.4 million and \$597,641 for 1987 and \$4.3 million and (\$205,329) for 1986, respectively.
- TSCI now operates as a wholly owned subsidiary of Systems Center.

Significant marketing agreements include the following:

- In June 1988, Systems Center purchased the exclusive marketing rights to a line of systems software products developed by International Business Link, Inc. (IBL) for approximately \$1.1 million plus additional advanced royalties of \$700,000.
- The software products, which form the basis for Systems Center's Network Administration product line, provide status information and control facilities for administrators of IBM SNA networks.

- Under the agreement, Systems Center was granted a ten-year exclusive worldwide right to license and market the IBL network administration products. Systems Center will fund a portion of IBL's research and development costs and subsequently will have exclusive marketing rights to future IBL products. The agreement also gives Systems Center an option to purchase a minority equity interest in IBL in the future.
- Systems Center has an agreement with IBM (expiring in 1994) granting to IBM a worldwide, nonexclusive right to license Systems Center's VMBACKUP, VMARCHIVE, and VMTAPE software products and provide support for customers who have licensed these products from IBM. Royalties received by Systems Center under this agreement were approximately \$1.4 million, \$1.1 million, and \$1.5 million for 1988, 1987, and 1986, respectively.
- In January 1989, Systems Center terminated its exclusive distributor agreement with Network Systems Corporation for the international marketing of the Network DataMover product line. Systems Center is now marketing this product line through its foreign subsidiaries and independent agents.

As of December 31, 1988, Systems Center had 381 employees, of which 337 were located in the U.S. and 44 were located in Europe. The company currently has approximately 415 employees.

Key Products and Services

A three-year summary of source of net revenue follows:

SYSTEMS CENTER, INC. THREE-YEAR SOURCE OF REVENUE SUMMARY (\$ millions)

	FISCAL YEAR					
	1988		1987		1986	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software products	\$36.8	71%	\$25.5	71%	\$25.2	81%
Product support and enhancements	14.9	29%	10.5	29%	6.1	19%
TOTAL	\$51.7	100%	\$36.0	100%	\$31.3	100%

A further breakdown of 1988 revenue follows (differences from the amounts reported above are due to rounding and provisions for returns):

ITEM	REVENUE \$ MILLIONS	PERCENT OF TOTAL
Software product licenses		
• VM Software		
Domestic	\$17.4	34%
International	11.7	23%
	\$29.1	57%
• Network DataMover		
Domestic licenses	\$5.6	11%
International licenses	1.1	2%
	\$6.7	13%
• Relational Database		
Domestic licenses	\$0.8	1%
International licenses	0.1	—
	\$0.9	1%
Subtotal	\$36.7	71%
Product support and enhancement services		
Domestic	\$12.2	24%
International	2.4	4%
Subtotal	\$14.6	28%
IBM royalties	\$1.4	3%
(Provision for returns)	(\$1.0)	(2%)
TOTAL	\$51.7	100%

As of December 31, 1988, Systems Center had approximately 23,300 products installed worldwide, compared to 17,600 at the end of 1987, and 13,000 at the end of 1986. Systems Center's current product offerings are summarized in the exhibit.

- The fees for licenses of the VM, Network DataMover, and Relational Database products are based on processor size.

VMCENTER II is Systems Center's integrated system that consists of a family of 10 products for use with IBM's VM operating system. The products are designed to enhance the control, productivity, and security of a customer's data processing resources.

EXHIBIT
SYSTEMS CENTER SOFTWARE PRODUCTS

PRODUCT	YEAR INTRODUCED	PRICE RANGE
VM Software Products		
- VMBACKUP	1981	Individual VM products vary in price based on processor size. The products range from \$3,000 to \$42,250
- VMARCHIVE	1982	
- VMTAPE	1982	
- VMSCHEDULE	1983	
- VMACCOUNT	1984	
- VMSECURE	1984	
- VMSORT	1985	
- VMOPERATOR	1986	
- VMBATCH	1986	
- VMMONITOR	1986	
- VMSPOOL	1987	
- VMDIRECT	1988	
- VMCENTER II	1986	\$21,500-\$130,500
- VMCENTER	1984	\$16,500-\$97,750
Network DataMover Products		
- NDM-MVS	1984	\$25,500 - \$41,500
- NDM-VSE	1986	\$5,000 - \$15,000
- NDM-VM	1988	\$7,000 - \$29,000
- NDM-VMS	1988	\$5,400 - \$24,000
- NDM for Tandem	1989	\$20,000 - \$30,000
- NDM-PC	1984	Available on request
Relational Database Products		
- DB/SECURE	1986	\$15,000 - \$24,000
- DB/EDITOR	1987	\$7,500 - \$18,900
- DB/REPORTER	1987	\$8,000 - \$26,500
- DB/REORGANIZER	1988	\$6,000 - \$15,400
- DB/OPTIMIZER	1988	\$16,000 - \$25,500
- DB/AUDITOR	1989	\$10,000 - \$16,000
- DB/ADMINISTRATOR	1989	Available on request
Network Administration Products		
- Net*Edit	1989	\$18,000

- The products are designed for IBM and compatible mainframes and IBM's 9370 computers running VM. VMCENTER II products, which can be licensed together or separately, include the following:
 - VMBACKUP^R protects data by providing for secondary backup storage.
 - VMARCHIVETM manages disk storage, primarily by allowing storage of seldom-used data files on magnetic tapes and disks.
 - VMTAPE^R controls, automates, and manages a VM tape library and the use of tape drives.
 - VMSCHEDULE^R is a work-scheduling system that optimizes use of computer resources by allowing tasks to be scheduled to run unattended during off-peak hours.
 - VMACCOUNT^R provides resource consumption accounting, reporting, and capacity management for the VM environment.
 - VMSECURE^R controls access to the resources of a VM-based data center.
 - VMSORTTM rearranges data based on a user-specified sequence.
 - VMOperatorTM enhances the interface between VM and the data center operations staff.
 - VMBATCHTM is a batch processing system for the VM environment.
 - VMMONITORTM is a monitoring tool that diagnoses and helps solve system performance problems.
- Systems Center also markets VMCENTER, an integrated product that includes VMBACKUP, VMARCHIVE, VMTAPE, VMSCHEDULE, VMACCOUNT, VMSECURE, and VMSORT.
- Other VM products marketed by Systems Center include VMSPOOLTM, which monitors and facilitates use of the VM spool space, and VMDIRECT, a directory management product that includes many of the functions included in VMSECURE.

Systems Center's subsidiary The Systems Center, Inc. (TSCI) develops, markets, and supports the Network DataMover family of data movement software products that facilitate the movement of files among multiple computers and operating environments.

- Network DataMover products include the following:
 - Network DataMover-MVS (NDM-MVS) runs with the MVS operating system.
 - Network DataMover-VM (NDM-VM) runs with the VM operating system.
 - Network DataMover-VSE (NDM-VSE) runs with the VSE operating system.
 - Network DataMover-VMS (NDM-VMS) runs with the VMS operating system. NDM-VMS allows data exchange between VAX computers running NDM-VMS, and IBM mainframes running NDM-MVS, NDM-VM, and NDM-VSE.
 - Network DataMover for Tandem runs with the Tandem Guardian 90 operating system. NDM for Tandem allows data exchange between Tandem computers running Guardian 90 and IBM mainframes running NDM-MVS, NDM-VM, or NDM-VSE.
 - Network DataMover-PC (NDM-PC) runs with the PC-DOS and MS-DOS operating systems. NDM-PC primarily functions as a vehicle for moving data between IBM microcomputers and IBM mainframes running NDM-MVS, NDM-VM, and NDM-VSE.
- Systems Center intends to develop additional Network DataMover products for IBM and certain non-IBM environments.
- TSCI has entered into an agreement under which Sage Software, Inc. holds a nonexclusive license to reproduce only the NDM mainframe-to-micro function for combination with Sage's APS proprietary software products.

Systems Center's Relational Database Products Division (formerly the Applied Relational Technology Division) was formed in 1986 to develop, license, and support products that augment the use of IBM's SQL/DS relational data base management system, often used in VM environments.

- The division's products include the following:
 - DB/EDITOR™ (formerly VMSQL/EDIT) is a full-function table editor for SQL/DS.
 - DB/REPORTER™ (formerly VMSQL/REPORT) is a report writer for SQL/DS.
 - DB/REORGANIZER™ (formerly VMSQL/REORG) allows a data base administrator to reorganize or regenerate data base objects to improve data base performance, use disk space more effectively, and accommodate changes in the data base structure.
- As a result of the acquisition of DB View, Inc. in January 1989, Systems Center offers the following products which are designed to enhance IBM's DB2 data base management system.
 - DB/SECURE™ is a security management system.
 - DB/OPTIMIZER™ provides the information, recommendations, and time savings to optimize DB2 performance through application and physical design tuning.
- During 1989 the Relational Database Products Division expects to release DB/AUDITOR™, a product that generates audit reports of DB2 usage by table name, user, privilege type, and time; and DB/ADMINISTRATOR™, a system for the SQL/DS data base administrator to manage the archive and logging process and interact with consoles of data base machines.

The Network Administration product line is marketed by Systems Center as a result of the ten-year exclusive marketing agreement with International Business Link, Inc. These products provide status information and control facilities for administrators of IBM SNA networks.

- The first of such products is Net*Edit™, which is scheduled for availability during 1989. Net*Edit, which runs on IBM and compatible microcomputers, assists the network manager and systems programmer in the dynamic change process of managing IBM SNA networks.
- Future products will include Net*Monitor™, which assists network operators and help desk personnel through performance monitoring of the network; and Net*Control™,

which allows unattended operations for network control and maintenance.

To receive product support and enhancements for Systems Center's products after the expiration of the one-year period included with a perpetual license, a customer must pay an annual fee in advance that generally approximates 15% to 25% of the current perpetual license fee for the product.

- Product support, including problem resolution and assistance in product installation, is provided primarily by 24-hour telephone access. With the exception of the Network DataMover products, no on-site support to customers is provided because the products can be installed and operated by the customer with telephone support.
- Included in product support and enhancements revenue is approximately \$5 million in 1988 and \$4.5 million in 1987 derived from technical or informational sales seminars. Approximately 59 seminars were conducted for prospects and existing customers in approximately 48 cities in North America during 1988.

Industry Markets

Systems Center's customers include manufacturers, financial institutions, oil companies, educational institutions, and government agencies.

- As of December 31, 1988, Systems Center had licensed one or more of its products to approximately 94% of the Fortune 500 U.S. industrial corporations, 36% of the Fortune 500 U.S. industrial corporations, and 20% of Fortune 500 U.S. service corporations.

Systems Center's National Accounts Group, which was established in January 1987 to address the requirements of marketing to major corporate customers, was expanded in early 1988.

In January 1987, the company also formed a Federal Government Marketing Group in response to increased demand from the federal government for VM Software products.

In early 1988, Systems Center formed a Major Accounts Group to address the needs of its larger customers not designated as national accounts to plan and support the role of the VM operating system in networked environments.

**Geographic
Markets**

Approximately 69% of Systems Center's 1988 revenue was derived from the U.S. and Canada. The remaining 31% of revenue was derived from international sources, primarily Europe.

A three-year summary of source of revenue follows:

**SYSTEMS CENTER, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1988		1987		1986	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S. and Canada	\$35.7	69%	\$26.9	75%	\$25.5	82%
Europe	14.3	28%	8.1	23%	5.0	16%
Other	1.7	3%	1.0	2%	0.8	2%
TOTAL	\$51.7	100%	\$36.0	100%	\$31.3	100%

Of the total of \$14.3 million of European revenue in 1988, approximately \$4.3 million was derived from the U.K., \$4.0 million from France, and \$2.6 million from West Germany.

Since its inception, the company has marketed the VM Software product line in North America primarily by telephone from headquarters. The Network Administration and Relational Database product lines have also been marketed by telephone.

The Network DataMover products are marketed through a direct sales force in the U.S. and Canada. Systems Center has regional sales offices in Burlingame (CA), Chevy Chase (MD), Chicago, Irving (TX), Waltham (MA), Wellesley Hills (MA), and Westport (CT). Telephone sales have recently been used to supplement these direct-marketing efforts.

International subsidiaries are located in the U.K., Belgium, The Netherlands, West Germany, and France. Systems Center also has several nonexclusive marketing agreements with independent foreign agents.

COMPANY HIGHLIGHT

SYSTEM DEVELOPMENT CORPORATION

5151 Camino Ruiz
Camarillo, CA 93010
(805) 987-6811

Frederick F. Jenny, President and CEO
Wholly Owned Subsidiary of Burroughs Corporation
Total Employees: 5,905
Total Revenue, Fiscal Year End
12/31/83: \$465,300,000
Total Noncaptive Computer Services
Revenue: \$252,000,000

THE COMPANY

- System Development Corporation (SDC) was formed in 1956 as a spinoff from the Rand Corporation. In its early years, SDC operated as a nonprofit organization almost exclusively on systems development contracts for the U.S. Air Force. In 1981, after 12 years of operating as a for-profit company, SDC was acquired by the Burroughs Corporation.
- In 1983 Burroughs merged two of its existing operations into SDC and gave the organization responsibility for all U.S. government computer business. Under the new organization SDC:
 - Designs, integrates, and supports computer-based air space management, command and control, and intelligence systems, and provides operational support to space missions.
 - Manages government information processing facilities; develops, installs, and manages processing services contracts; and provides professional services.
 - Develops, produces, and supports custom computer-based equipment and subsystems used in information processing systems.
 - Markets and services the Burroughs computer product line to the U.S. government and major prime contractors.
 - Performs research in areas of computer networks, systems security, distributed data management, signal processing, artificial intelligence, and hardware and software engineering.
- Total SDC revenue was \$465.3 million in 1983, a slight decline over 1982 revenue of \$473.3 million. Noncaptive computer services revenue in 1983 was \$252 million.

SYSTEM DEVELOPMENT CORPORATION

- SDC had 5,905 employees in December 1983 segmented as follows:

Marketing/sales	167
Software technologies	1,105
Systems analysts	533
Managerial	412
Engineering science	939
Human factors	53
Research	16
Other professionals	95
Administrative and operations	662
Manufacturing	246
Technical support	946
Clerical support	<u>731</u>
	5,905

- Major competitors include TRW, Computer Sciences Corporation, Control Data Corporation, Planning Research Corporation, Electronic Data Systems Corporation, Ford Aerospace, and Hughes Aircraft.

KEY PRODUCTS AND SERVICES

- Revenue for 1983 is estimated by INPUT as follows:

	<u>Percent of Total</u>	<u>Revenue (\$ millions)</u>
Professional Services	37%	\$170
Processing Services		
Facilities Management	13	60
Remote Computing	<u>4</u>	<u>20</u>
Total Computer Services	54%	\$250
Custom Hardware Products	17	80
Hardware Product Sales	<u>29</u>	<u>135</u>
Total Revenue	100%	\$465

- The majority of SDC's professional services revenue comes from the federal government, most of which is defense related. Areas of expertise are in command and control, communications, systems engineering, air traffic control, satellite tracking, and simulation systems.

- Major defense contracts currently held include:

- Providing 130 Burroughs medium systems, software, and technical support and maintenance to the USAF Phase II Base-Level Data Automation Program for general-purpose ADP application at all U.S. Air Force bases worldwide.

SYSTEM DEVELOPMENT CORPORATION

- Designing and developing applications software for a transportable air defense command and control system for the Marine Corps Tactical Air Operations Central-85.
- Systems software design and development for a distributed processing network for the Acoustic Research Center of the Defense Advanced Research Projects Agency.
- Delivery and support of Cray-1 and Cyber 170 computers for the Air Force Weapons Laboratory at Kirkland AFB (NM) to re-search future weapons systems.
- Development of an Integrated Automated Intelligence Processing System under a five-year contract with the Navy.
- Providing communications systems engineering support for the U.S. Army's Joint Interoperability of Tactical Command and Control Systems (JINTACCS) program under a major multiyear program.
- Developing an integrated system to process real-time missile, satellite, and aircraft data at the U.S. Air Force Western Test Range. As the prime contractor for designing, developing, implementing, and supporting the system, SDC manages six major subcontractors.
- Developing a major command, control, and communications system, known as the Status Control Alert and Reporting System (SCARS II), for NATO.
- Contracts held with nondefense agencies include:
 - Maintenance of the Emergency Command Control Communications System, an advanced computer-aided dispatching system for the Los Angeles Police Department. It was designed and developed by SDC to improve officer response time to emergencies via a computer-aided dispatch system and advanced radio communications.
 - Supplying an automated trademark search system to the U.S. Patent and Trademark Office that will enable trademark examiners and others to have on-line access to a data base of more than 500,000 active trademark registrations, including the design image portion of more than 250,000.
 - Installation of six ARTS II's (Automated Terminal Radar Systems) operating in conjunction with an airport's radar to provide computer-processed information displays used by air traffic controllers for the FAA.

SYSTEM DEVELOPMENT CORPORATION

- Updating the Los Angeles County Sheriff Department's communications and dispatch system that was originally installed and put into operation by SDC in 1975.
- Processing services revenue is derived from several health claim contracts, processing support for government contracts, and SDC's information service for on-line bibliographic retrieval.
 - SDC holds state contracts with Iowa, Louisiana, and Massachusetts for processing of Medicaid claims. The Medicaid Management Information System checks claims for validity, approves payment to 40,000 providers, and generates management program assessment reports.
 - Claims Administration System (CAS) is a service for large employers with medical, dental, and disability insurance plans. Clients include third-party administrators, corporations, commercial insurance companies, and Blue Cross/Blue Shield associations. Users access CAS through direct phone lines.
 - CAS is also licensed as a software product running on Burroughs hardware (5900 and up) and IBM hardware (S/370 and up). Pricing starts at \$350,000.
 - Other processing facilities management contracts held by SDC include:
 - Processing basic (Pell) grants for five million college students and 7,000 institutions for the Department of Education.
 - Facilities management for NASA; the Department of Transportation's Transportation Systems Support Center; the Defense Communication Agencies' Command Control Technical Support Center, which supports the joint chiefs of staff in the Pentagon; and the Environmental Protection Agency's National Telecommunications Network and National Computer Center. The EPA facility, one of the government's largest, links 3,000 users through its network.
 - SDC Information Service (formerly SDC Search Service) provides an on-line worldwide coordinated system of information data bases to support information retrieval, dissemination, and analysis. More than 16,000 users in 7,500 organizations use the service to access periodicals, reports, books, and patents in the scientific, technical, and business areas. Offered are data bases on patents, energy, chemistry, engineering, business management, pollution, etc.
 - The mainstay of the product is on-line computer processing with the ORBIT® Search Service. The ORBIT Search Service is comprised of:

SYSTEM DEVELOPMENT CORPORATION

- The Public File Service that provides information in the areas of patents, chemistry, energy, pharmaceuticals, government, and engineering.
- The Private File Service that enables a customer to put data on the ORBIT Retrieval System for private access.
- The Sponsored File Service that allows the information producer to market a file to a specified subscriber base.
- SDC is marketing the ORBIT Information Retrieval System to companies and government agencies for in-house use.
- In 1983 SDC announced ORBIT SearchMaster System, a micro-computer software applications package designed to facilitate information retrieval processes. It automates log-in procedures, allows users to create search strategies offline, and will execute a preformulated search automatically from log-in to log-off.
- SDC also markets several other products:
 - STARDYNE[®], a structural analysis software system, was developed for solving any problem in linear elastic, static, and dynamic analysis. It is used by more than 300 engineering and aerospace firms for design of nuclear power plants, offshore drilling rigs, and similar major structures. It is offered through CDC's Cybernet Network and by eight other service bureaus in the U.S., Canada, Europe, and Japan.
 - MIL/INT Network[™] System is a communications product line that makes it possible for customers to construct large, robust local-area networks (LANs) and interconnections with long-haul networks, such as the Defense Data Network.
 - MIL/INT applies the DoD standard protocols, including Transmission Control Protocol (TCP) and Internet Protocol (IP), to insure highly reliable end-to-end service and system interoperability.
 - Product elements include a complete broadband LAN; gateways that interconnect the LAN with other LANs; network frontends that connect host computers and workstations; terminal bus interface units and concentrators that connect one or more terminals, workstations, and peripherals to the LAN; and a Network Control Center that provides fault detection, performance monitoring, and network management.
 - The TM-IB[™] Radar Display Simulator is designed for use by the military for individual or crew training for tactical air control, air defense, air traffic management control, and similar operational applications. The desk-size simulator uses microprocessor technology and control software to generate displays on standard radar scopes.

SYSTEM DEVELOPMENT CORPORATION

- Custom hardware products developed by SDC are primarily sold to government agencies under contract. Examples of contracts held are:
 - Providing 238 API340 printers to the Internal Revenue Service as part of the Integrated Remittance Processing System installed by Burroughs in 1977 at the 10 IRS service centers throughout the country.
 - Installing 6,200 terminals of the Burroughs B20 family of TEMPEST-qualified microcomputer workstations and 3,400 TEMPEST-qualified printers (TEMPEST is a security design designation that allows electronic equipment to be protected from compromising emanations) to support work applications in the FBI's Washington headquarters and in its field offices in 61 cities in the U.S.
 - Under subcontract to Harris Corporation, SDC is furnishing mobile message switch and message management subsystems for its Direction, Control, and Warning Communications Systems (DCWCS) contract from the Federal Emergency Management Agency. SDC will construct and deliver four sheltered mobile DCWCS units containing Burroughs TEMPEST-qualified and Electromagnetic Pulses-hardened medium computer systems and microcomputer workstations.
- SDC is also responsible for sales and maintenance of the Burroughs computer and peripherals equipment line to all federal government agencies.

INDUSTRY MARKETS

- Revenue was derived as follows in 1983:

U.S. Department of Defense	59%
Other federal, state, and local government agencies	34
Foreign agencies	2
Commercial customers	<u>5</u>
	100%

GEOGRAPHIC MARKETS

- In 1983 98% of SDC's revenue was derived from the U.S. and 2% was international.
- Major U.S. facilities are located in Huntsville (AL); Jefferson (AR); Lompoc, San Diego, Camarillo, and Sunnyvale (CA); Colorado Springs and Denver (CO); Washington (DC); Des Moines (IA); Slidell and Baton Rouge (LA); Suitland (MD); Cambridge and Somerville (MA); Battle Creek and Plymouth (MI); Fort Monmouth (NJ); Durham (NC); Paoli and Warminster (PA); Fredericksburg, Hampton, McLean, and Norfolk (VA).

SYSTEM DEVELOPMENT CORPORATION

COMPUTER HARDWARE

- SDC maintains one Amdahl 470 V/7 and one 470 V/7A operating under MVS at its computer center in Camarillo. Various configurations based on Burroughs, IBM, CDC, and DEC equipment is maintained at other locations for processing and development work.



COMPANY HIGHLIGHT

SYSTEM DEVELOPMENT CORPORATION

2500 Colorado Avenue
Santa Monica, CA 90406
(213) 820-4111

George E. Mueller, Chairman and CEO
Wholly Owned Subsidiary of Burroughs
Corporation
Total Employees: 4,030
Total Revenue, Fiscal Year End
12/31/81: \$223,500,000
Noncaptive Revenue:
\$221,285,000

THE COMPANY

- System Development Corporation (SDC) was formed in 1956 as a spinoff from the Rand Corporation. From 1956 to 1969, SDC operated as a nonprofit organization working almost exclusively on systems development contracts for the U.S. Air Force. While government contracts contribute most of the company's revenue, commercial projects have become increasingly significant, and accounted for 19% of 1981 revenue.
- On January 5, 1981, SDC was acquired by Burroughs Corporation for \$98 million in cash and merged into the company as a wholly owned subsidiary.
 - The acquisition alleviated a potential problem faced by the System Development Foundation, a nonprofit organization which owned two-thirds of SDC (much of the remaining stock was owned by present and former SDC employees). According to the Tax Reform Act of 1969, the Foundation was to divest itself of its primary interest in SDC by 1989. Before the acquisition, SDC made several attempts at a public stock offering in order to provide liquidity to its stockholders, but the attempts were not successful.
 - As a Burroughs subsidiary, SDC will have access to financial and other resources needed for future growth.
- In 1981 SDC changed its fiscal year end to a calendar year basis to coincide with its parent. Revenue for the 12 months ended December 1981 was \$223.5 million, a 20% increase over 1980 revenue of \$186.8 million. Restated financials for prior years based on SDC's new fiscal year end are not available.
- Prior to the acquisition, SDC's fiscal year ended on June 30. The following financial summary represents the last detailed report issued by the company and is presented here for historical reference.

SYSTEM DEVELOPMENT CORPORATION

SDC
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

FISCAL YEAR ITEM	6/81	6/80	6/79	6/78	6/77
Revenue	\$206,369	\$168,271	\$165,964	\$145,044	\$130,092
• Percent increase from previous year	23%	1%	14%	11%	18%
Income before taxes	\$ 17,469	\$ 11,933	\$ 6,350	\$ 4,508	\$ 5,648
• Percent increase (decrease) from previous year	46%	88%	41%	(20%)	32%
Net income	\$ 9,519	\$ 7,033	\$ 3,750	\$ 1,550	\$ 2,711
• Percent increase (decrease) from previous year	35%	88%	142%	(43%)	42%
Earnings per share	N/A	\$ 4.89	\$ 2.29	\$ 0.94	\$ 1.49
• Percent increase (decrease) from previous year		114%	144%	(37%)	45%

- The company spent 1.5% of its total calendar 1981 revenue on research and development.
- Two operating units were transferred after SDC's acquisition.
 - SDC Products Group, which marketed the SDC Records ManagerTM storage and retrieval system (now renamed Burroughs OFIS file), was merged with the Burroughs Office Automation Division to form the Burroughs Office Systems Group, and is no longer part of SDC.
 - A commercial data center, previously run by Burroughs, was consolidated within SDC's Commercial Services Division.
- SDC was organized as follows during calendar 1981:
 - SDC Systems Group develops large-scale systems and provides contract programming and other professional services primarily to federal government agencies.
 - SDC Services Group develops and operates benefits processing systems for federal, state, and local governments. Facilities management is a major segment of the group's business.

SYSTEM DEVELOPMENT CORPORATION

- The Commercial Services Division processes employee health claims, provides on-line access to bibliographic data bases, and licenses software.
- The Systems Management and Engineering Division offers project management, systems engineering, and process and applications engineering to the energy and utilities industries. This division was previously part of SDC Systems Group.
- The Research and Development Division supports the other operating units with R&D. The division focuses on computer networks, information and data management, systems security, and signal processing. Some outside contract work is also undertaken.
- On August 12, 1982 Burroughs announced the merger of its Federal and Special Systems Group (F&SSG) with SDC, effective January 1, 1983. F&SSG projects include worldwide automation of U.S. Air Force bases, air traffic control systems, and a communications system for NATO. The new group will be called System Development Corporation - a Burroughs Company. Administrative headquarters will be located in Camarillo (CA), with major offices in Santa Monica, McLean (VA), and Paoli (PA).
- Under the new organization, SDC's Commercial Services Division will operate as part of the SDC Services Group. SDC Systems Group, Systems Management and Engineering Division, and Research and Development Division will remain as separate operating entities.
- F&SSG business will be incorporated into the new organization under the following operating units:
 - Burroughs Standard Products Group will market and support Burroughs mainframe equipment and operating systems software for the federal government.
 - The Custom Products Group will engineer and manufacture special-purpose devices, subsystems, and components for the government market. Included are custom terminals and workstations, detection and secure communications devices, subsystem integration, and mail handling systems.
 - The Air Force Systems Division includes program management of all Burroughs Standard Products business with the Air Force.
- SDC had 4,030 employees in December 1981. As of May 1982 there were 4,117 employees, segmented as follows:

SYSTEM DEVELOPMENT CORPORATION

Marketing/sales	39
Software technologists	994
Systems analysts	475
Managers	389
Engineering sciences	201
Human factors	64
Research	23
Other professionals	59
Technical support	825
Clerical support	654
General and administrative	<u>394</u>

4,117

- Major competitors include TRW, Computer Sciences Corporation, Control Data Corporation, Planning Research Corporation, Electronic Data Systems Corporation, Ford Aerospace, and Science Applications.

KEY PRODUCTS AND SERVICES

- Revenue for calendar year 1981 was derived as follows:

	<u>Percent of Total</u>	<u>Revenue (\$ millions)</u>
Professional services	85%	\$190.0
Processing services	13	29.0
Software products	<u>2</u>	<u>4.5</u>
	100%	\$223.5

- SDC Systems Group offers professional services to federal, state, and local government agencies.
 - Major U.S. military contracts currently include:
 - Developing applications software for a transportable air defense command and control system for the Marine Corps Tactical Air Operations Central-85.
 - Systems software development for a distributed processing network for the Acoustic Research Center of the Defense Advanced Research Projects Agency.
 - Delivery and support of two Cray-1 computers for the Air Force Weapons Laboratory at Kirtland AFB (NM) to research future weapon systems. SDC was awarded the \$31 million, eight-year Fourth Generation Advanced Computer System (FACS) program contract in November 1979.

SYSTEM DEVELOPMENT CORPORATION

- Development of an Integrated Automated Intelligence Processing System under a five-year contract with the Navy. Work on the system, which is one of the largest developed to date, began in 1980.
 - Providing communications systems engineering support for the U.S. Army's Joint Interoperability of Tactical Command and Control Systems (JINTACCS) program under a major multi-year program.
 - Overall systems management, including integration and quality assurance of software supplied by several vendors, for the Air Force Satellite Control Facility. SDC has provided these services to the Air Force for over 20 consecutive years.
 - Designing training simulators for the Air Force, a project performed by SDC since 1954, when it was a division of the Rand Corporation. In 1981 the company provided a new portable simulator for use in remote air control posts.
- Recent nonmilitary contracts include:
- Development of the Emergency Command Control Communications System, an advanced computer-aided dispatching system, for the Los Angeles Police Department's fleet of nearly 1,000 law enforcement vehicles.
 - Analyzing the results of school nutrition programs for the Department of Agriculture.
 - Providing the front end processing system for a CDC 205 vector processor for NASA's Goddard Laboratory for the Atmospheric Sciences.
 - Supplying a weather briefing and flight planning system for the FAA. Flight movement, weather, and navigational aid information critical to flight safety will be processed and disseminated to pilots.
- Major foreign contracts include:
- Design, development, and installation of an airspace management and air traffic control system for a foreign government. The \$50 million multi-year contract, awarded in August 1981, is the largest initial value contract in SDC's history.
 - Creation of a center used by the government of India to process and distribute meteorological data received from the INSAT-1 geostationary satellite. Information is used in tropical storm

SYSTEM DEVELOPMENT CORPORATION

forecasting to aid in flood control and disaster prevention. The \$5.5 million contract was awarded in October 1980.

- Providing systems integration and software support for the National Space Agency of Japan's satellite launch program and software development and training for the Japanese Antisubmarine Warfare Operations Center. These services are offered through SDC of Japan, Ltd., a joint venture formed with Long-Term Credit Bank of Japan, Japan Economic Journal, and a group of Japanese businessmen.
- The Services Group provides facilities management at the clients' site or at SDC's computer center. The group also develops and operates benefits processing systems for federal and state governments. Major projects include:
 - Facilities management for the U.S. Navy, Army, NASA, the Department of Transportation, and the Defense Communications Agency.
 - Facilities management for the Environmental Protection Agency's National Telecommunications Network and National Computer Center in North Carolina. The facility, one of the government's largest, links over 1,500 users through its network.
 - Processing Basic (Pell) Grants for five million college students for the Department of Education. The multi-year contract, awarded in February 1981, is valued at \$27 million.
 - Design and implementation of a pilot program for issuing public assistance funds and food stamps by credit card for the City of New York.
 - Processing more than 17 million Medicaid claims in 1981 for the states of Iowa and Florida. SDC's Medicaid Management Information system checks claims for validity, approves payment to providers, and generates management program assessment reports.
 - In mid-1982 SDC was awarded a contract to process Medicaid claims for the state of Massachusetts.
- The Commercial Services Division processes employee health claims, offers on-line access to bibliographic data bases, and licenses software.
 - Claims Administration System (CAS) is a service for large employers with medical and dental insurance plans. SDC is one of the largest providers of health claims processing in the U.S., with more than 40 clients. Clients include third-party administrators, corporations, commercial insurance companies, Blue Cross/Blue Shield associations, and quasi-governmental organizations such as Australia's Medibank.
 - Users access CAS through direct phone lines.

SYSTEM DEVELOPMENT CORPORATION

- CAS is also licensed as a software product running on Burroughs and IBM or compatible mainframes. Prices range from \$350,000 to \$500,000.
- CAS revenue grew by more than 30% in FYE June 1981.
- SDC recently introduced Burroughs and CICS/VSAM versions of the CAS system and designed a Billing Enrollment System for insurance companies.
- SDC® Search Service provides on-line access to periodicals, reports, books, and patents in the scientific, technical, and business areas. The system includes files in agriculture, business management, chemistry, education, engineering, energy, geoscience, and pollution. Eighty-four data bases containing over 55 million citations are available. More than 5,000 clients use the service.
- Users access the service via TYMNET or GTE-Telenet.
- Derwent-SDC Search Service, a joint venture established in June 1981 with Derwent Publications Ltd., provides the on-line retrieval service in Europe through a data center located in Reading (U.K.). In 1979, a computer center was opened in Tokyo by SDC of Japan to offer Search Service.
- STARDYNE®, a structural analysis system developed by SDC, is used by over 300 engineering firms in 19 countries for design of nuclear power plants, offshore drilling rigs, and similar major structures. It is offered through Control Data Corporation's Cybernet Network and by eight other service bureaus in the U.S., Canada, Europe, and Japan.
- The Systems Management and Engineering Division serves energy and utilities organizations with EDP-related engineering and management support. Current projects include:
 - For the Department of Energy's Gas Centrifuge Enrichment Plant in Oak Ridge (TN), systems engineering, integrated cost and schedule management, quality assurance, configuration management, interface control, and training.
 - Management support for the Department of Energy's Fossil Fuel Processes Program, which coordinates the development of environmentally acceptable methods for coal gasification and liquefaction by the energy industry.
 - Arctic, geotechnical, structural, mechanical, and civil engineering systems support to the Office of the Federal Inspector for the Alaska Natural Gas Transportation System. Work is performed under a subcontract to Unified Industries, Inc.

SYSTEM DEVELOPMENT CORPORATION

- Engineering analysis of electric power generation stations performed for the Los Angeles Department of Water and Power to improve the reliability of equipment and systems.
- The Software Factory^{T.M.} is a separate organization within SDC and is responsible for reviewing, directing, and auditing all software developed by the company. The organization has developed a set of techniques to improve the systems development process. Tools such as a program flow analyzer to assess the adequacy of program testing, a program production library that tracks the development of all program elements, and a development control system that supports planning and scheduling, are some of the standard processes used by SDC in building information systems. The methodology developed by the Software Factory has gained wide acceptance within government agencies.
- In January 1982 SDC opened its System Integration Facility in Camarillo (CA). The facility provides raised computer floor space and support area for several SDC contracts requiring total systems integration of hardware and software.
- In April 1982 work was completed on one of five planned office buildings in Camarillo. A second building is scheduled for completion in March 1983.

INDUSTRY MARKETS

- Revenue was derived as follows in calendar 1981:

U.S. Department of Defense	39%
Other federal, state, and local government agencies	37
Foreign governments	5
Commercial customers	<u>19</u>
	100%

GEOGRAPHIC MARKETS

- In calendar 1981, 92% of SDC's revenue was derived from the U.S. and 8% was international.
- U.S. offices are located in Albany (NY), Cambridge (MA), Colorado Springs (CO), Des Moines (IA), Durham (NC), El Segundo (CA), Eatontown (NJ), Fredericksburg (VA), Huntsville (AL), Hampton (VA), Norfolk (VA), Oak Ridge (TN), Plymouth (MI), San Diego, Slidell (LA), Sunnyvale (CA), Tallahassee (FL), Vandenberg A.F.B. (CA), Wakefield (MA), Warminster (PA), and McLean (VA).
- Foreign office locations include Tokyo and Reading (U.K.).

COMPUTER HARDWARE AND SOFTWARE

- SDC maintains one Amdahl 470 V/7 and one 470 V/7A, operating under MVS, at its new computer center in Camarillo (CA). Computer facilities were

SYSTEM DEVELOPMENT CORPORATION

relocated from Santa Monica during the first half of 1982. The following hardware is maintained at various sites:

- 1 IBM 4331, VM370.
 - 1 Burroughs 5930, MCP.
 - 2 Control Data 3800s, System II.
 - 2 DEC PDP-11/70s, RSX/11M, UNIX.
 - 1 DEC PDP-11/34, UNIX.
 - 1 DEC PDP-11/45, UNIX.
 - 1 DEC VAX-11/750, VMS.
 - 1 DEC VAX-11/780, UNIX.
 - 2 SEL 32/55s, RTM.
 - 1 SEL 32/75, RTM.
- The Burroughs Plymouth (MI) data center was consolidated with SDC's Commercial Services Division and operates the following equipment.
- 1 Burroughs 5900, MCP.
 - 3 Burroughs 4700s, MCP.



COMPANY HIGHLIGHT

SYSTEM DEVELOPMENT CORPORATION

2500 Colorado Ave.
Santa Monica, CA 90406
(213) 820-4111

George E. Mueller, Chairman
and President
Private Corporation
Total Employees: 3,800
Total Revenues, Fiscal Year End
6/29/80: \$168,271,000

THE COMPANY

- System Development Corporation (SDC) was formed in 1956 as a spin-off from The Rand Corporation. From 1956 to 1969, SDC operated as a non-profit organization working almost exclusively on system development contracts for the U.S. Air Force. SDC's primary source of revenue continues to be government contracts, although services to commercial clients are gaining as a percent of the company's total revenues.
- In August 1980, Burroughs Corporation agreed in principle to acquire SDC for \$98 million in cash, which will result in SDC's becoming a wholly owned subsidiary of Burroughs. The SDC stockholders approved the agreement in December 1980, thereby making the agreement effective January 5, 1981.
 - The acquisition by Burroughs will alleviate a potential problem faced by the System Development Foundation, a nonprofit organization owning two-thirds of SDC. (The remaining shares of stock are owned by present and former SDC employees.) According to the Tax Reform Act of 1969, the Foundation was to divest itself of its primary interest in SDC by 1989. While the company has made several attempts at a public stock offering in order to provide liquidity to its stockholders, the attempts have not been successful.
- FY 1980 surpassed all previous records for profitability. Revenues increased only 1% over FY 1979; however, both income before taxes and net income were up 88%. Record earnings per share were posted at \$4.89. A five-year summary follows:

COMPANY HIGHLIGHT/SYSTEM DEVELOPMENT CORPORATION

SDC
FIVE-YEAR FINANCIAL SUMMARY
(\$ Thousands, Except Per Share Data, FYE 6/29)

ITEM \ FISCAL YEAR	1980	1979	1978	1977	1976
Revenues	\$168,271	\$165,964	\$145,044	\$130,092	\$109,935
• Percent increase from previous year	1%	14%	11%	18%	1%
Income before taxes	\$ 11,933	\$ 6,350	\$ 4,508	\$ 5,648	\$ 4,273
• Percent increase (decrease) from previous year	88%	41%	(20%)	32%	23%
Net income	\$ 7,033	\$ 3,750	\$ 1,550	\$ 2,711	\$ 1,910
• Percent increase (decrease) from previous year	88%	142%	(43%)	42%	106%
Earnings per share	\$ 4.89	\$ 2.29	\$ 0.94	\$ 1.49	\$ 1.03
• Percent increase from previous year	114%	144%	(37%)	45%	106%

- SDC management attributes its slight increase in revenues in 1980 to increased sales to the U.S. government and state and local agencies.
- SDC is organized as follows:
 - SDC Systems Group, the largest of the SDC operations, develops large-scale computer-based systems primarily for agencies within the federal government.
 - SDC Services Group supports transaction services, including Medicaid for state governments, claims processing, bibliographic search services for commercial customers and facilities management contracts with federal government agencies.
 - SDC Products Group develops and markets an electronic publishing system (TEXT II®) and a storage and retrieval system (SDC Records Manager™).
 - The Research and Development Division supports internal development activities and also performs some contract work.
- In FY 1979, SDC management decided to dispose of several auxilliary operations in order to increase concentration on its primary business in preference to local consulting and data centers. Each of the activities was sold to members of its management group.

COMPANY HIGHLIGHT/SYSTEM DEVELOPMENT CORPORATION

- SDC's Applied Information Development (AID) unit, a Chicago-based consulting firm, was sold in November 1979 for \$4,187,000.
- In March 1979 Aquila, BST LTÉE/LTD, SDC's wholly owned Canadian subsidiary, was sold. Aquila was not profitable in 1979.
- May and Speh Data Processing Center in Chicago was sold in November 1978.
- A Washington (DC) department, specializing in electronic engineering consulting services, was sold in September 1978.
- In August 1980, SDC purchased land in Camarillo (CA) for the purpose of building a manufacturing plant for SDC products, including the SDC Records Manager.
- SDC's primary strength lies in its ability to provide skilled technical people to compete effectively in the classic government systems business: systems engineering, computer-based communications and space sciences areas.
- There are 2,450 professional employees of SDC and 1,350 nonprofessional employees. The professional employees are segmented as follows:

Software technologists	920
Systems analysts	468
Managers	352
Engineering sciences	198
Human factors	51
Other professionals	<u>461</u>
	2,450
- Primary competition stems from Computer Sciences Corporation, Planning Research, Systems Consultants, Inc. and Science Applications.

KEY PRODUCTS AND SERVICES

- Although SDC has been trying to expand its commercial client base, its business is predominately government-based. A comparison of 1980 and 1979 revenue sources follows:

SDC REVENUE SOURCES
(\$ Thousands)

Source	Percent of Total		Percent of Total	
	6/29/80	Revenues	6/24/79	Revenues
Department of Defense	\$ 69,807	42%	\$ 66,300	40%
Non-Defense Agencies				
and State and Local	62,948	37	55,596	33
Governments	35,516	21	44,068	27
Commercial				
	\$168,271	100%	\$165,964	100%

- SDC Systems Group accounts for 58% of 1980 revenues. It primarily provides contract services to federal, state and local government agencies. Since its inception, SDC has been a major contractor in supplying computer-based services to the Air Force.
 - Major Air Force contracts currently held by SDC include:
 - A \$24 million Fourth Generation Advanced Computer System (FACS) program contract, whereby SDC will deliver and support two CRAY-I super computers to be used by the Air Force Weapons Laboratory for research into future weapons systems.
 - Completion of the Telemetry Integrated Processing System (TIPS) and its turnover to the Air Force for operational use at Vandenberg Air Force Base. TIPS interlinks 19 computers for concurrent processing of vehicle launch and flight test data.
 - A major system upgrade for the Air Force Satellite Control Facility, which accounted for approximately 10% of total revenues. SDC performs integration and quality control testing of software developed by other companies for use in the Air Force's primary space network.
- Major nonmilitary contracts include:
 - A \$25 million project with the Los Angeles Police Department to install the initial radio equipment, dispatch consoles and communication links for the Emergency Command Control Communications System (ECCCS).
 - From Unified Industries, Inc., a \$16.5 million subcontract for design review and construction monitoring of the Alaskan Natural Gas Transportation System.
 - Joint-venture agreements to provide system engineering, technical evaluation and program control for two contracts totaling approx-

COMPANY HIGHLIGHT/SYSTEM DEVELOPMENT CORPORATION

imately \$40 million in support of the Department of Energy's Fossil Fuel Processes Program and the Gas Centrifuge Enrichment program.

- A \$3.5 million analysis for the Department of Agriculture to determine the impact of the school nutrition program on the health and well-being of millions of school children.
- Major non-U.S. contracts include:
 - Software and system products for a Moroccan air defense system.
 - A Japanese naval defense system for Fujitsu, Inc.
 - Command and control design support to NATO and the German Defense Ministry.
 - Development of a \$5.5 million meteorological data utilization center for India.
- The SDC Services Group contributed \$65 million to 1980 revenues (39%). It provides facilities management, transaction services and professional software services.
 - The U.S. Department of Transportation selected SDC to provide data processing services in support of its research program at the Transportation Systems Center (TSC) in Cambridge (MA). SDC supports scientific, real-time and mini/microcomputer applications as well as operates TSC's computer facility.
 - SDC won a renewal of the Command and Control Technical Center support contract for the Defense Communications Agency, under which it has provided advanced programming support on behalf of the Joint Chiefs of Staff since 1975.
 - A Cyber 203 installed at NASA's Langley (VA) Research Center and an on-line data management system in support of the Space Shuttle at the Slidell (LA) Computer Complex were both handled by SDC in its continued support of NASA.
 - In fiscal 1977, SDC began targeting the Medicaid claims processing market. In FY 1980, related Medicaid activities contributed approximately \$30 million to total revenues.
 - SDC processes Medicaid claims for the State of Florida (accounting for approximately six percent of total revenues) and, as of April 1980, for the State of Iowa.
 - SDC's proprietary insurance claims service, the Claims Administration System (CAS), received 11 new subscribers and renewals in 1980. The total number of corporations and other

institutions using the computerized medical claims processing service was 27 in FY 1980. Clients include: American Cyanamid Company, The Garrett Corporation, Travenol Laboratories, Inc. and Weyerhaeuser Company.

- Design, development and installation of an interactive health insurance processing system for the Australian Health Insurance Commission was completed in FY 1980.
- A \$6.6 million, 30-month contract was awarded SDC by the New York State Department of Social Welfare to support the development and installation of an interactive welfare management system.
- SDC makes available some 70 government and commercial information data bases through SDC® Search Service, an on-line bibliographic retrieval service. Users are linked to SDC's computer by an international communication network.
- In December 1979, SDC began operating its SDC Search Service from a new computer center in Tokyo. The center is operated by System Development Corporation of Japan.
- SDC's STARDYNE® Structural Analysis System is currently in use by over 300 engineering companies through CDC's Cybernet Network. STARDYNE's use was expanded by its license to additional service bureaus in the U.S., Europe, Japan and Canada.
- SDC's Products Group is currently marketing two products:
 - TEXT II, an electronic publishing system for newspapers, has been marketed and been in various stages of development for several years. TEXT II is sold on a Hewlett-Packard 1000. The system supports:
 - Editorial capabilities.
 - Cold-type production of news print.
 - Classified and display ads.
 - Accounting functions such as ad accounting and billing, accounts receivable and cash posting.
 - Management reporting.
 - SDC Records Manager attaches to existing word processors to manage, store, retrieve and display text that has been processed by word processors or other computers. The strength of the new product appears to lie in its retrieval strategy: a pattern-matching algorithm that searches every word in a file for a possible relationship to a query. The system will store up to 75,000 full pages of text and will lease for \$1,900 to \$2,500 per month.

COMPANY HIGHLIGHT/SYSTEM DEVELOPMENT CORPORATION

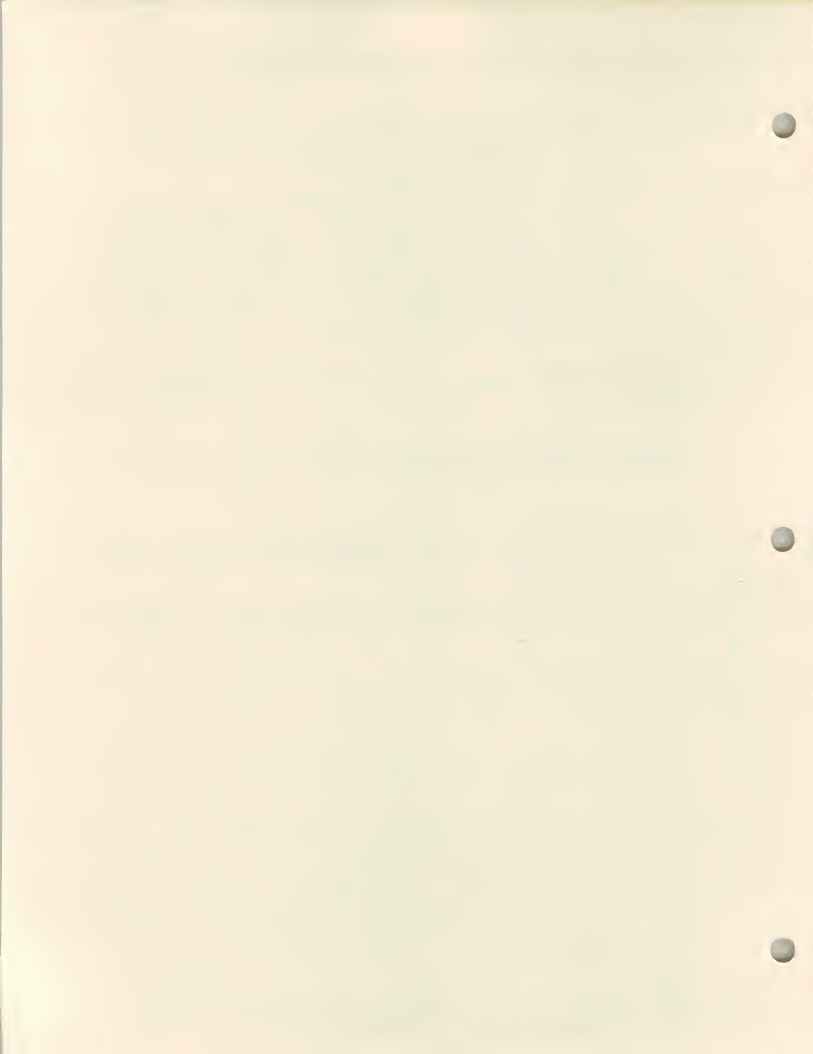
- SDC Records Manager is still in the prototype stage. SDC management claims that after a year of test marketing, customer shipments are scheduled to begin in early 1981.
- The Software Factory^{T.M.} is a separate organization within SDC, and is responsible for reviewing, directing and auditing all software developed by the company. The organization has developed a set of techniques to improve the system development process. Tools such as a program flow analyzer to assess the adequacy of program testing, a program production library that tracks the development of all program elements, and a development control system that supports planning and scheduling are some of the standard processes used by SDC in building information systems. The methodology developed by the Software Factory has gained wide acceptance within government agencies.

INDUSTRY MARKETS Sales to the U.S. Government were 66% of total 1980 revenues, while 34% of revenues stemmed from private industry and state and local governments.

GEOGRAPHIC MARKETS SDC derives the large majority of its revenues from the U.S. and 3% from international sources.

COMPUTER HARDWARE

- SDC maintains an Amdahl V7 in its headquarters in Santa Monica to provide claims processing and search services. Its computer is accessed via TYMNET and GTE-Telenet.
- In December 1979, SDC opened a computer center containing one IBM 370/158 to provide its SDC Search Services.



COMPANY HIGHLIGHT

SYSTEM DEVELOPMENT CORPORATION

2500 Colorado Blvd.
Santa Monica, CA 90406
(213) 829-7511

George E. Mueller, Chairman and
President
Private Corporation
Total Employees: 4,500
Total Revenues, Fiscal Year End
6/24/79: \$165,964,000

THE COMPANY

- System Development Corporation (SDC) was formed in 1956 as a spin-off from the RAND Corporation. From 1956 to 1969, SDC operated as a non-profit organization, working almost exclusively on system development contracts for the U.S. Air Force. The transition to becoming a profitable company took ten years to complete. By the end of 1979, SDC reported all outstanding loans had been paid and company revenues and profits had surpassed all previous records.
- The majority of SDC's outstanding capital stock is owned by System Development Foundation, a California non-profit organization. Although SDC has wanted to go public, the timing has never been quite right. The company's low profit margins and high dependency on government system contracts has not made it attractive to investors. In an attempt to realign the service and product market areas, SDC has dropped marketing efforts in the financial and banking areas, sold two service bureaus (May and Speh and Aquila BST, Ltd.), entered the claims processing services area, and has developed two turnkey products. Whether the realignment and new product areas will increase profits and bring SDC closer to a public offering in the near future is speculative at this time.
- SDC reported revenues of \$165,964,000 in 1979, a 14% increase over 1978 revenues of \$145,044,000. Net income and earnings per share received the most significant increases: 142% and 144%. A five year financial summary follows:

COMPANY HIGHLIGHT/SYSTEM DEVELOPMENT CORPORATION

SDC
FIVE YEAR FINANCIAL SUMMARY
(\$ Thousands, Except Per Share Data)
(FYE 6/30)

ITEM \ FISCAL YEAR	1979	1978	1977	1976	1975
Revenues	\$165,964	\$145,044	\$130,092	\$109,035	\$108,627
. Percent increase from previous year	14%	11%	18%	1%	20%
Income before taxes and extraordinary item	\$ 6,350	\$ 4,508	\$ 5,648	\$ 4,273	\$ 3,471
. Percent increase (decrease) from previous year	41%	(20%)	32%	23%	24%
Net income	\$ 3,750	\$ 1,550	\$ 2,711	\$ 1,910	\$ 925
. Percent increase (decrease) from previous year	142%	(75%)	42%	106%	20%
Earning per share	\$ 2.29	\$.94	\$ 1.49	\$ 1.03	\$.50
. Percent increase (decrease) from previous year	144%	(37%)	45%	106%	25%

- SDC is organized as follows:
 - SDC Systems Group, the largest of the SDC operations, develops large-scale computer based systems primarily for agencies within the Federal government.
 - SDC Services Group supports claims processing, bibliographic search services, and facility management contracts with Federal and State government agencies.
 - SDC Products Group, develops and markets an electronic publishing system (TEXT II) and a storage and retrieval system (Records Manager).
 - SDC Research and Development Group supports internal development activities and also performs some contract work.
- SDC's primary strength lies in its ability to provide skilled technical people to compete effectively in the classic government systems business: systems engineering, computer based communications, and space sciences areas.
- Primary competition stems from Computer Sciences Corporation, Planning Research, Systems Consultants, Inc., and Science Applications.

COMPANY HIGHLIGHT/SYSTEM DEVELOPMENT CORPORATION

KEY PRODUCTS AND SERVICES

- Although SDC has been trying to expand into service areas for commercial clients, its business base is predominately government. A comparison of 1979 and 1978 revenue sources follows:

SDC REVENUE SOURCES
(\$ Thousands)

SOURCE	6/24/79	Percent of Total Revenues	6/25/68	Percent of Total Revenues
Department of Defense	\$66,300	40%	\$65,837	45%
Non-Defense Federal Agencies and State and Local Government	\$55,596	33%	\$34,825	24%
Private Industry and Other	\$44,068	27%	\$44,382	31%

- INPUT estimates that approximately 90% of SDC's 1979 revenues were derived from professional consulting services, 9% from processing services, and 1% from hardware sales.
- SDC Systems Group primarily provides contract services to Federal, state and local government agencies. Since its inception, SDC has been a major contractor in supplying computer based services to the Air Force.
 - Major Air Force contracts currently held by SDC include:
 - Development of a telemetry integrated processing system.
 - Design of the Space Defense Command and Control System.
 - System support to the Air Force Satellite Control Facility.
 - Design of an advanced multi-computer network.
 - Major non-military contracts are:
 - A \$28 million contract to develop a command and control communications system for the Los Angeles Police Department.
 - A ground support system for the National Oceanic and Atmospheric Administration.
 - Energy related contracts with the Department of Energy.
 - Training and evaluation contracts with the U.S. Office of Education.
- The SDC Services Group provides the following:
 - Performs facilities management services for government and commercial clients.
 - Using the SDC Claims Administration System, transaction services are provided to process claims for Medicare and employee medical and

COMPANY HIGHLIGHT/SYSTEM DEVELOPMENT CORPORATION

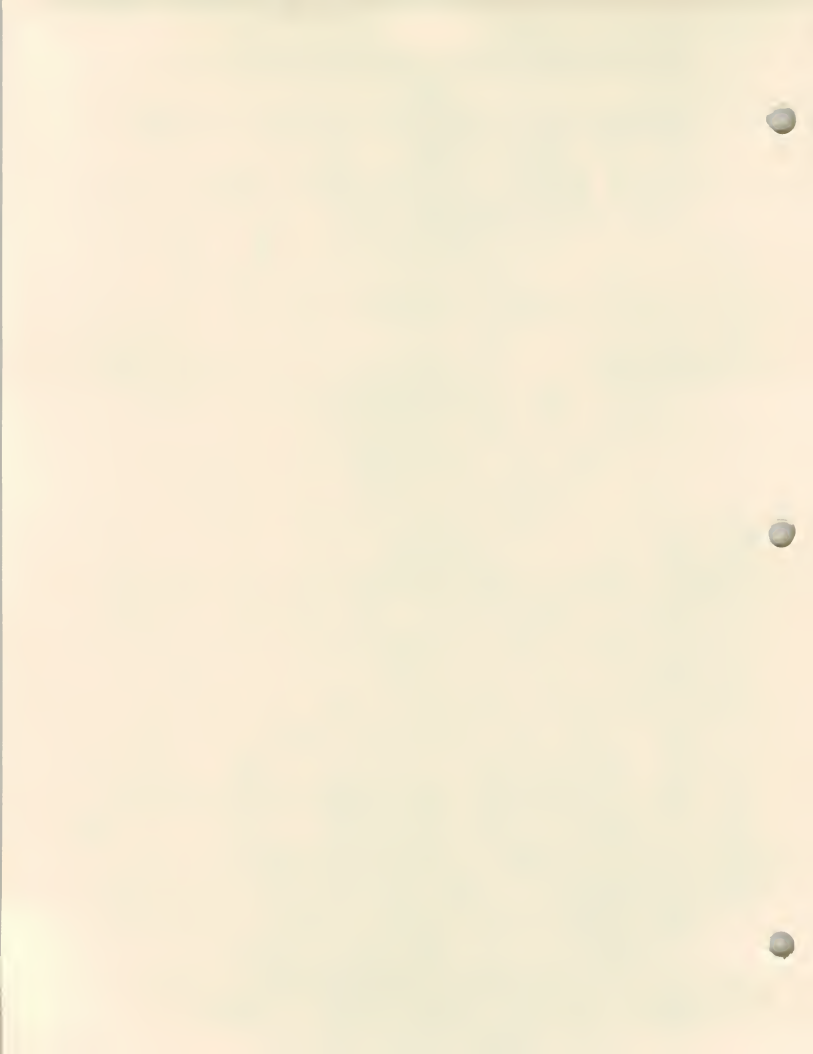
- dental claims for private corporations. At the end of FY 1979, SDC had ten claims processing contracts. Clients include the State of Florida, the Australian Health Insurance Commission, Detroit Edison, Weyerhaeuser, and Safeway Stores.
- SDC Search Services provides on-line bibliographic retrieval services. About 60 government and commercial information data bases are currently available for network access.
 - SDC's STARDYNE program for structural analysis is currently in use by over 300 engineering companies through CDC's Cybernet network.
- SDC's Products Group is currently marketing two products:
 - TEXT II, an electronic publishing system for newspapers, has been marketed and been in various stages of development for several years. Although a number of TEXT II systems have been installed, it has not been a very profitable business venture because most installations require customization of the software. TEXT II is sold on a Hewlett-Packard 3000. A companion product, TEXT II-20, is designed for small to medium-sized newspapers. The system supports:
 - Editorial capabilities.
 - Cold-type production of new print.
 - Classified and display ads.
 - Accounting functions such as ad accounting and billing, accounts receivable and cash posting.
 - Management reporting.
 - Records Manager, a series of products which will use storage and retrieval methods to access information (primarily office files), is scheduled for delivery by the end of 1980. The strength of the new product appears to be its pattern-matching algorithm that searches every word in a file for a possible relationship to a query. The system will store up to 75,000 full pages of text and will lease for \$1,500 to \$2,500 a month.
 - The Software Factory is a separate organization within SDC, and is responsible for reviewing, directing and auditing all software developed by the company. The organization has developed a set of techniques to improve the system development process. Tools such as a program flow analyzer to assess the adequacy of program testing, a program production library that tracks the development of all program elements, and a development control system that supports planning and scheduling are some of the standard processes used by SDC in building information systems. The methodology developed by the Software Factory has gained wide acceptance within government agencies.

INDUSTRY MARKETS Approximately 40% of SDC's FY 1979 revenues were derived from agencies within the Department of Defense, 33% from Federal non-defense agencies and state and local governments, and 27% from private industry and other sources.

COMPANY HIGHLIGHT/SYSTEM DEVELOPMENT CORPORATION

GEOGRAPHIC MARKETS SDC derives an estimated 97% of its revenues from the U.S. and 3% from international sources.

COMPUTER HARDWARE SDC maintains an Amdahl V7 in its headquarters location to provide claims processing and search services.



COMPANY PROFILE

SYSTEM INTEGRATORS, INC.

P.O. Box 13626
Sacramento, CA 95853
(916) 929-9481

Alden L. Edwards, President
Private Corporation
Total Employees: 380
Total Revenue, Fiscal Year End
9/30/91: \$70,000,000*

*INPUT estimate

The Company

System Integrators, Inc. (SII) develops, markets, and supports turnkey systems for the news publishing industry. The company has installed more than 300 systems which publish more than 480 newspapers, wire services, catalogs, and magazines throughout North America, Europe, the U.K. and Ireland, the Middle East, and the Asia/Pacific region.

- Founded in 1973, SII began by providing custom programming services to Northern California newspapers. In 1976, the company began marketing the System/22, its first-generation newspaper publishing system. By 1979, the company had installed more than 85 systems in small newspapers throughout the U.S.
- In 1981, SII first installed its next generation system, the Tandem NonStop-based System/55^R, at the *San Jose Mercury News*. The product has since gained wide industry acceptance and has been installed for over 480 publications worldwide.
- During 1989, SII accelerated its move to provide standards-based solutions to the high-end newspaper publishing marketplace by forming a strategic marketing and technology alliance with Digital Technology International, an Orem (UT)-based news publishing software developer.
- The agreement gives SII the rights to market Digital Technology's entire Macintosh-based product line to newspapers in North America, France, Germany, Italy, and Austria.
- The two companies have since successfully completed a cooperative development product to integrate Macintosh-based imaging products with Tandem computers. The integration software, called Mac/55, was announced in May 1990 and was released for customer shipment later in 1990.

- To date, SII has installed systems ranging in price from \$100,000 to \$10 million, with upwards of 1,000 terminals.

SII made its initial public offering in November 1983 and a secondary offering in March 1986. In January 1989, the stockholders of SII voted to approve a recommendation of the Special Committee of the Board of Directors to take the company private once again.

- A management team, led by company President Alden L. Edwards, now owns SII in equity partnership with Citicorp Venture Capital, Ltd. and with financing from Security Pacific Bank of California and Chase Manhattan National Bank.

SII currently has approximately 380 employees, 280 in the U.S. and 100 internationally.

Key Products and Services

SII's computer-aided publishing systems include a complete line of tools--fault-tolerant computers and intelligent controllers, workstations, and software--designed to support editors, writers, and advertising, display ad makeup, and production personnel.

- SII is committed to industry-standard hardware and software platforms. Standards-based products offered from SII include Compaq, Apple Macintosh, and Intel 80386 PC/workstations.
- Adobe's PostScript page description language and Tandem NonStop computers are major components of SII's text-based product line. Macintosh-based imaging products support display ad makeup, graphics, and color.

SII currently markets the following product lines:

- The System/55 product line was introduced in 1980 to meet the high-reliability needs of large circulation metropolitan newspapers. The System/55 XR, announced in January 1992, is aimed at newspapers with midrange circulation (20,000 to 80,000).
- Major software components to the system include System/55 Editorial for creating, editing, managing, and typesetting editorial copy, and System/55 Advertising for selling, costing, maintaining, and typesetting advertisements
- System/55 uses multiple Tandem NonStop processors and can network up to 1,000 SII Coyote workstations.

- There are currently over 300 System/55 installations worldwide.
- *PageStream: The Distributed Page Management System* provides interactive applications and data base management software for precise control over the entire newspaper page production (pagination) process and expands the existing capabilities of System/55, with enhanced graphics handling features.
 - The products access the Tandem data base to provide layout and display of advertising artwork and page designs.
 - The SII Echo pagination workstation is a high-end graphics workstation to support the *PageStream* family of products. The Echo is based on a Compaq Deskpro 386/25B Model 110 with a 25-Mhz Intel microprocessor.
- Imaging products include:
 - *AdSpeed*, which provides Macintosh-based display advertising layout and design capabilities in color or monochrome with integrated graphics
 - *PageSpeed*, a Macintosh-based pagination system for the layout editor
 - *SpeedPlanner*, which implements *PageSpeed* by providing dummying, planning, and tracking of pages so multiple people can work on individual page elements
 - *SpeedSetter*, the SII family of high-speed PostScript-compatible laser imagesetters
 - *Mac/55*, software that integrates SII's imaging products with its Tandem-based publishing system and users of third-party Macintosh applications
- MarketShare products are used to maintain and reclaim market share lost to other news distribution and advertising media.
 - *SpaceRes* is used to sell, position, and schedule pre-placed ROP ads weeks, months, or years prior to publication.
 - *Complex Zoning and Rating (CZAR)* provides a method for scheduling, rating, and costing ads that are placed in multiple or zone editions or special inserts.

- CreditLink is a credit card authorization system that submits an electronic transaction to a service bureau for the purpose of authorizing the payment of transient classifieds.

SII customer service is divided into four functional areas as follows:

- Project Management, for system installation
- Field Services, for hardware maintenance
- Educational Services, for customer training
- Support Services, for software support

Industry Markets

Approximately 95% of revenue is derived from newspaper publishers. The remaining 5% is derived from catalog publishers, magazines, and wire services.

Of the 100 largest daily newspapers in the U.S., 35 run on SII systems. Of the 11 fastest growing newspapers in the U.S., seven run on SII systems.

Geographic Markets

INPUT estimates that over 55% of SII's fiscal 1991 revenue was derived from the U.S. and the remainder from international sources.

SII's U.S. office is in Sacramento (CA).

Worldwide sales are handled through subsidiaries in Australia (Australian System Integrators Pty. Ltd.), Germany (System Integrators Deutschland GmbH), Scandinavia (System Integrators Scandinavia, Oy-Helsinki), France (System Integrators, France S.A.), and Italy and Spain (System Integrators Italia, S.p.A.). SII established a European headquarters, System Integrators Europe (SIE), in 1986 to oversee the expansion of the European market.

COMPANY PROFILE

SYSTEM INTEGRATORS, INC.
P.O. Box 13626
Sacramento, CA 95853
(916) 929-9481

James P. Lennane, Chairman and CEO
Alden L. Edwards, President
Public Corporation, OTC
Total Employees: 526
Total Revenue, Fiscal Year End
9/30/86: \$68,360,000

THE COMPANY

- System Integrators, Inc. (SII), founded in 1973, develops, markets, and supports interactive Tandem-based turnkey systems for computer-aided publishing (CAP) applications to newspapers, catalog publishers, and news wire services. The company has over 180 CAP systems installed worldwide.
- Fiscal 1986 revenue reached \$68.4 million, a 13% increase over fiscal 1985 revenue of \$60.8 million. Net income rose 25% from \$7.8 million in fiscal 1985 to \$9.8 million in fiscal 1986. A five-year financial summary follows:

SYSTEM INTEGRATORS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	9/86	9/85	9/84	9/83	9/82
Revenue	\$ 68,360	\$ 60,753	\$ 50,796	\$ 34,249	\$ 23,522
. Percent increase from previous year	13%	20%	48%	46%	55%
Income before taxes	\$ 17,234	\$ 13,570	\$ 11,660	\$ 6,965	\$ 4,249
. Percent increase from previous year	27%	16%	67%	64%	65%
Net income	\$ 9,764	\$ 7,792	\$ 6,292	\$ 3,819	\$ 2,185
. Percent increase from previous year	25%	24%	65%	75%	46%
Earnings per share	\$ 0.85	\$ 0.73	\$ 0.60	\$ 0.41	\$ 0.24
. Percent increase from previous year	16%	22%	46%	71%	50%

- Revenue increases in 1986 reflect growth in shipments of the company's System/55 and initial shipments of the System/25 which is targeted to medium-sized newspapers; increased revenue from maintenance services; and increased add-on sales (hardware and software).

SYSTEM INTEGRATORS, INC.

- Net income increases were attributed to increased add-on sales (which are high-margin items), operating efficiencies within the Customer Service Division, and increased interest and dividends.
- Research and development expenditures were approximately \$5.4 million (8% of revenue) in fiscal 1986, \$5.4 million (9% of revenue) in fiscal 1985, and \$3 million (6% of revenue) in fiscal 1984.
- In March 1986, SII made a public offering of 2.1 million shares of common stock, of which 1.1 million shares were sold by the company and one million shares by selling shareholders. Net proceeds to the company of approximately \$15 million are to be used for general corporate purposes.
- Revenue for the three months ending December 31, 1986 was \$16 million, compared to \$15 million for the same period in 1985. Net income for the period increased 17% to \$1.9 million from \$1.65 million. Management attributes these increases to continued strength in add-on sales and maintenance services revenues.
- SII currently has five wholly owned subsidiaries:
 - CADDEX Corporation of Woodinville (WA) was acquired by SII in January 1987 for \$1 million in cash.
 - CADDEX develops technical documentation software products for the corporate electronic publishing systems market.
 - CADDEX had approximately seven employees at the time of the acquisition.
 - RING Computers, Inc., headquartered in Sacramento (CA), develops operating systems and desktop application software for corporate electronic publishing environments.
 - SII also has international subsidiaries in Australia, West Germany, and the U.K.
- As of September 30, 1986, SII had 526 employees, segmented as follows:

Sales	31
Customer services	163
Product development	102
Manufacturing	104
International	58
Finance and administration	<u>68</u>
	526
- As of February 28, 1987, the company had 470 employees.

- Major competitors by market area include the following:
 - Competitors that supply CAP systems to large publishers include Atex, Inc. (a wholly owned subsidiary of Eastman Kodak) and Crosfield Data Systems, Inc.
 - Competitors that supply CAP systems to medium-sized U.S. publishers include Atex, Compugraphic Corporation, Crosfield Data Systems, Dewars, CTEXT, and Digital Equipment Corporation.
 - Competitors in the international market include Norsk Data (Scandinavia and the U.K.) and Alfa Systems (Germany).

KEY PRODUCTS AND SERVICES

- Approximately 70% of SII's fiscal 1986 revenue was derived from turnkey systems, 20% from hardware and software add-on sales, and 10% from maintenance services. A three-year summary of source of revenue follows (\$ million):

FISCAL YEAR ITEM	9/86		9/85		9/84	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Turnkey systems	\$47.7	70%	\$47.1	77%	\$41.2	81%
Add-on sales	13.7	20	8.5	14	6.6	13
Maintenance and other (a)	7.0	10	5.2	9	3.0	6
Total	\$68.4	100%	\$60.8	100%	\$50.8	100%

(a) Other includes interest and dividends earned on cash generated from operations.

- SII's CAP systems are targeted to newspaper publishers and, to a lesser extent, catalog publishers, international wire services, and corporate electronic publishers.
 - The company's two products, the System/55 and the System/25, enable editors and reporters, on-site and in the field, to compose, manipulate, and format text for publication. The products are also used to create, price, and correct classified ads.
 - The systems are based on Tandem computers and use intelligent workstations manufactured by SII.

- The System/55 is the company's most powerful system and contains software that may be customized by users.
 - The system is targeted to large metropolitan newspapers (with circulations in excess of 50,000).
 - The System/55 can network up to 1,200 of the company's CoyoteTM workstations with up to 16 Tandem TXP control processors.
 - In fiscal 1986 the company installed the System/55 at 19 newspaper sites worldwide, bringing its total installed base of System/55s in newspaper sites to 90 at the end of fiscal 1986. There are currently 96 System/55s installed at newspapers.
 - There are currently two System/55s installed at catalog publishers and four at wire services.
- The System/25, first shipped in October 1985, is targeted to medium-sized newspaper publishers (with circulations of 25,000 to 50,000).
 - The System/25 can network up to 112 of the company's DakotaTM workstations using Tandem EXT computers.
 - As of September 30, 1986, there were nine System/25s installed. There are currently 14 systems installed.
- Over the past year, SII has been dedicated to the development of a family of hardware and software products targeted to the newspaper industry in particular, and corporate publishing in general. These products include capability to perform soft typesetting, to assemble display advertising with and without graphics, and to perform full editorial pagination. Products currently under development include the following:
 - The Sierra pagination and display advertising system. The company expects to deliver the first of these systems to the San Jose Mercury-News by December 1987.
 - OPL, a programming language that will provide portability of SII applications to any 32-bit microprocessor.
 - Sequoia workstations for text and graphics applications to be used with the Sierra system.
 - In January 1987, SII announced the release of RING, a multi-user, multi-tasking, distributed operating system designed to facilitate networking of 32-bit microprocessor-based workstations. Ports have been completed to a 68020-based machine and to the new Compaq 386 Deskpro. Ports are planned for the new 68020-based Macintosh and the new 80386-based IBM PC.

INDUSTRY MARKETS

- Ninety percent of SII's fiscal 1986 revenue was derived from newspaper publishers. The remaining 10% of revenue is derived from catalog publishers and wire services.
- SII is expanding its target market to include corporate clients with in-house publishing requirements.
- SII customers include the Chicago Tribune, the Houston Chronicle, the Los Angeles Times, The Cincinnati Enquirer, the San Francisco Chronicle, the San Francisco Examiner, The Washington Post, Avon Products, Inc., The Straits Times (Singapore), Reuters Ltd., The Financial Times (London), and The Sydney Morning Herald.

GEOGRAPHIC MARKETS

- Approximately 63% of SII's fiscal 1986 revenue was derived from the U.S. and 37% from international sources. A three-year summary of source of revenue follows (\$ thousands):

ITEM \ FISCAL YEAR	9/86		9/85		9/84	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
U.S.	\$43,120	63%	\$34,481	57%	\$31,520	62%
Australia/Asia	6,436	9	12,618	21	8,312	16
Europe and other	18,804	28	13,654	22	10,964	22
Total	\$68,360	100%	\$60,753	100%	\$50,796	100%

- U.S. sales and services offices are located in Des Plaines (IL), Manchester (NH), and Herndon (VA).
- Foreign offices are located in the U.K., Australia, and West Germany.

COMPUTER HARDWARE AND SOFTWARE

- SII has the following computers installed at its headquarters for research and development and customer support:
 - 1 Tandem NonStop I.
 - 2 Tandem NonStop IIs.
 - 4 Tandem NonStop TXPs.
 - 8 SII System/25s.



Dropped

COMPANY HIGHLIGHT

SYSTEM, SCIENCE AND SOFTWARE (S³)
3398 Carmel Mountain Road
San Diego, California 92121
(714) 453-0060

Vernon H. Blackman, President
and Chief Executive Officer
Private corporation, closely held
Total company sales as of FY ending
8/75: \$7,200,000
Computer services sales 8/75:
\$1,200,000*

8/79 \$1.5 mil

NUMBER OF EMPLOYEES engaged in computer services: 20 (175 total)

KEY PRODUCTS/SERVICES: Computer services available through S³ consist mainly of batch services, which account for 65% of sales, and remote computing (remote job entry and time-sharing) which represents 30% of computer services. Machine time is S³'s primary service. The firm has had very limited success in marketing point of sales systems. Under a Federal government contract S³ has developed a method of modeling and predicting earthquakes. It has also developed a national data base of thermal water pollution for defining its impact on freshwater fish habitat.

APPLICATIONS: Scientific calculations account for 90% of computer services sales. The balance is divided evenly between general business and data base applications. S³ anticipates future royalties from both point of sale systems and the computer graphics division it has sold.

INDUSTRY MARKETS: S³ is primarily a government contractor. Government contracts account for 60% of annual sales, manufacturing represents 30% and the balance is split between medical/hospital and other industries.

GEOGRAPHIC MARKETS: Computer services sales are concentrated on the West coast, primarily in California. In addition to the corporate office in San Diego, branch offices are located as follows:

San Francisco Division
3200 Investment Boulevard
Hayward, California
(415) 785-8040

Green Farm Test Site
Frontage Road
San Diego, California
(714) 278-6795

Washington Research Center
111 South Fairfax Street
Alexandria, Virginia 22301
(703) 683-4656

COMPUTER HARDWARE AND SOFTWARE:

1	Univac 1108	EXEC 8
1	Data General Nova 800	RDOS

* Note: that a more detailed analysis of S³ has resulted in revising downward the original computer services sales shown in the Directory.

March/1976

INPUT

OVERALL ASSESSMENT AND TRENDS: S³ was formed some years ago with a charter of becoming a government defense contractor. Its forte is in such applied sciences as nuclear technology, shock physics, plasma physics and geophysics. As defense contract opportunities began to dwindle S³ sought methods of diversification, of which computer systems and services was one. The Transaction Data System Division was subsequently formed for the purpose of developing and marketing point-of-sale systems and services. Last year that division was sold to the May Department Stores Company, however S³ has retained some royalty rights on patents. Point-of-sale and May Department Stores appear to be far removed from the direction of S³. That is only until one realizes that Frank W. Clark Jr., Chairman of the Board, is also General Counsel for the May Department Stores, however. After developing a computer graphics operation which specialized in software packages for electric circuit design and wirewrapping analyses, S³ also sold that division in 1974. As in the case of selling the point-of-sale operation, sustaining sales are anticipated although none have been realized. Sale of its computer operations suggests that S³ will not be an aggressive force in the computer services market. Hence, computer services sales will increase at a relatively slow rate of 5% per annum.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

September 1996

System Software Associates, Inc. (SSA)

Chairman & CEO: Roger E. Covey
President & COO: Terry H. Osborne
500 West Madison
32nd Floor
Chicago, IL 60661
Phone: (312) 258-6000
Fax: (312) 474-7500
Internet: <http://www.ssax.com>

Status:	Public
Employees:	2,025 (11/95)
Revenue:	\$394,400,000
Fiscal Year End:	10/31/95

Key Points

- System Software Associates (SSA) offers an integrated line of business enterprise information systems to the industrial sector worldwide.
- During 1995, SSA acquired Softwright Systems Limited, a provider of business object technology and systems in Europe.
- During 1995, the company delivered distributed object applications based on its Distributed Object Computing Architecture (DOCA).
- In mid-1995, SSA sold its EDI software assets to Harbinger Corporation. SSA has been granted a license by Harbinger to continue to market and sell Harbinger's EDI software products.
- During the year, SSA acquired two of its independent affiliates, SSA Northeast and Priority Systems, as well as minority interests in other affiliates.

Company Description

SSA, founded in 1981, develops, markets, and supports the following software product lines:

- The BPCS Client/Server product line consists of more than 40 integrated software products for manufacturing, financial, electronic data interchange, and toolset applications for IBM AS/400, RS/6000, and HP 9000 platforms.
- Interoperable Tool Set Products are designed to help users develop and maintain applications.

SSA sells and supports its products in more than 70 countries through a distribution network consisting of branch offices and an affiliate network of independent software and services firms.

To date, SSA has licensed approximately 100,000 software products in more than 10,000 institutions worldwide.

Structure and Operations

Worldwide, SSA has 53 principal offices, 144 support centers, and 90 affiliate partners in more than 70 countries.

- SSA's North American operations, headquartered in Chicago, include 14 principal offices, 32 support centers, and 17 affiliates supporting 3,200+ BPCS sites.
- Latin America operations, headquartered in Buenos Aires (Argentina), include five principal offices, 22 support centers, and 17 affiliates supporting 700+ BPCS sites.
- Asia/Pacific operations, headquartered in Hong Kong, include 18 principal offices, 34 support centers, and 16 affiliates supporting 1,500+ BPCS sites.

- Europe, Middle East, Africa operations, headquartered in Camberley, Surrey (U.K.), has 16 principal offices, 56 support centers, and 40 affiliates supporting 2,600+ BPCS sites.

Company Strategy

SSA's product strategy incorporates a cooperative processing architecture, compliance with IBM's SAA, graphic user interface capabilities, client/server technologies, and seamless integration to other technologies.

The company's software development strategy includes:

- Addressing the complete spectrum of enterprise business system requirements with fully integrated products
- Offering one family of products worldwide, suitable for all localities and regulatory requirements
- Employing client/server technology throughout all product offerings
- Engineering products for the user that are easy to learn
- Providing scalability to meet the needs of small, medium, and large businesses

SSA is supporting an open systems strategy and is moving all its product lines to a configurable, object-based architecture that runs on multiple hardware platforms, including the IBM AS/400 as well as UNIX-based IBM RS/6000, Digital UNIX, and HP 9000 business systems.

SSA is changing its organizational structure from a regional to a country focus. SSA's strategy is to increase its global presence by gaining an SSA country operation in strategic

markets, and then seek additional business partners with increased emphasis on joint ventures. SSA has also organized its sales force into seven vertical markets—pharmaceutical; food, beverage, and tobacco; consumer goods; automotive; electronics; chemical; and forest/paper products.

Financials

SSA's fiscal 1995 revenue reached \$394.4 million, an 18% increase over fiscal 1994 revenue of \$334.4 million. Net income rose 121%, from \$15.4 million in fiscal 1994 to \$34.1 million in fiscal 1995.

A five-year financial summary follows:

System Software Associates, Inc. Five-Year Financial Summary (\$ Millions, except per-share data)

Item	Fiscal Year				
	10/95	10/94	10/93	10/92	10/91
Revenue	\$394.4	\$334.4	\$263.4	\$228.8	\$146.0
• Percent change from previous year	18%	27%	15%	(a) 57%	35%
Income before taxes	\$52.4	\$23.8	\$35.7	\$41.6	\$23.8
• Percent change from previous year	120%	(33%)	(14%)	75%	74%
Net income	\$34.1	\$15.4	\$23.4	\$26.6	\$15.4
• Percent change from previous year	121%	(34%)	(12%)	(a) 73%	75%
Earnings per share (b)	\$0.81	\$0.38	\$0.57	\$0.66	\$0.39
• Percent change from previous year	113%	(33%)	(14%)	(a) 69%	76%

(a) Includes a nonrecurring benefit (\$10.4 million of revenue; \$5.1 million of net income; \$0.19 per share) related to the adoption of mandatory revenue recognition procedures.

(b) Restated to reflect a three-for-two stock split in December 1995.

SSA management attributes fiscal 1995 results to the following:

- All geographic regions grew in fiscal 1995, with particularly strong results in Europe and Latin America.
- License fees grew 13% in fiscal 1995, compared to 28% in fiscal 1994, due to a slight decline in AS/400 revenue offset by sales of SSA's open systems product, which was released in the second quarter of fiscal 1995.

- Client services revenue grew 31% in fiscal 1995, following a 26% increase during fiscal 1994. These percentages are in line with the company's target of generating 70% of revenue from licenses and 30% from services.

Research and development expenses were approximately \$40.2 million (10% of revenue) \$35.1 million (11% of revenue) in fiscal 1994, and \$37.3 million (14% of revenue) in fiscal 1993. These amounts include software development costs that were capitalized.

General and administrative costs were \$63.5 million (16% of revenue) in fiscal 1995, compared to \$64.1 million (19% of revenue) in fiscal 1994 and \$45.6 million (17% of revenue) in fiscal 1993.

Sales and marketing expenses were \$88.5 million (22% of revenue) in fiscal 1995, compared to \$91.5 million (27% of revenue) in fiscal 1994 and \$63.8 million (24% of revenue) in fiscal 1993.

Revenue Source by Product/Service

Approximately 68% of SSA's fiscal 1995 revenue was derived from applications software product license fees and 32% from client support services.

A three-year source of revenue summary is shown below.

**System Software Associates, Inc.
Three-Year Source of Revenue Summary
(\$ Millions)**

	Fiscal Year					
	10/95		10/94		10/93	
Product/Service	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Software license fees	\$270.0	68%	\$239.5	72%	\$187.9	71%
Client services and other	124.4	32%	94.9	28%	75.5	29%
Total	\$394.4	100%	\$334.4	100%	\$263.4	100%

Interim Results

Revenue for the nine months ending July 31, 1996 was \$265.2 million, compared to \$266.7 million for the same period in 1995. Net losses were \$15.9 million, compared to net income of \$17.2 million for the same period a year ago.

- The principal factor contributing to the revenue and earnings decline was the postponement of decisions on software purchases and prospective clients wanting to more fully evaluate SSA's new BPCS Client/Server version 6.0.
- While business in the U.S. and Latin America was strong, sales were weak in both Europe and Asia.

- The company anticipates strong growth for the fourth quarter. The company has shipped BPCS Client/Server 6.0 to more than 160 clients and has won substantial new business head to head against its principal competitors.

Market Financials

SSA's revenue is derived primarily from the discrete manufacturing, process manufacturing, and distribution industries.

The target markets for the BPCS product line are industrial sector firms with annual revenues greater than \$50 million. Clients cover the entire industrial sector, which spans many industries, including chemicals and pharmaceuticals; food, beverage, and tobacco; consumer products, automotive, electronics

and instrumentation; forest products; and plastics and machinery.

Geographic Markets

Approximately 39% of SSA's fiscal 1995 revenue was derived from the U.S. The

remaining 61% was derived from various international sources, including \$26.4 million (7% of revenue) from sales made from the U.S. to other geographic markets.

A three-year summary of geographic source of revenue follows:

System Software Associates, Inc. Three-Year Geographic Source of Revenue Summary (\$ Millions)

	Fiscal Year					
	10/95		10/94		10/93	
Geographic Markets	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$152.1	39%	\$129.2	39%	\$81.3	31%
Europe/Middle East	167.4	42%	136.0	41%	116.3	45%
Asia/Pacific	5.4	1%	9.9	3%	16.5	6%
Canada/Latin America	6.7	2%	9.9	3%	14.0	5%
Other	62.8	16%	49.4	14%	35.3	13%
Total	\$394.4	100%	\$334.4	100%	\$263.4	100%

SSA has well-established operations in all major international markets, including Brazil, Mexico, Argentina, Italy, France, Spain, Germany, the Netherlands, the U.K., Australia, Singapore, Japan, and China.

Acquisitions

In July 1996, SSA acquired SSA North Central, an SSA Affiliate Business Partner since 1988.

- SSA North Central brings a team of 75 BPCS Client/Server experts to SSA, including a dozen developers with early experience working with SSA's Distributed

Object Computing Architecture (DOCA) technology.

- SSA North Central covers the midwestern territory of Iowa, Minnesota, North and South Dakota, and Wisconsin and serves more than 150 clients.

In June 1996, SSA Canada acquired Vector System Analysis Inc. of Montreal (Canada), a provider of UNIX and networking solutions.

- Prior to the acquisition, Vector had approximately 30 employees and was an Affiliate Business Partner of SSA.

- Vector now operates as SSA Canada's Eastern regional office, serving more than 100 clients in this region.

In January 1996, SSA acquired the Newi object technology originally developed by Softwright (an SSA subsidiary) and Integrated Objects.

- Newi business object middleware allows product-strength systems to be built from independent objects that can be independently delivered and added or removed from the system as required.
- The staff and Newi technology of Integrated Objects now reside in SSA Object Technology, which markets Newi directly to object application developers.

In November 1995, SSA acquired Softwright Systems Limited, a leading provider of business object technology and systems in Europe.

- As a result of the merger, SSA now also owns 50% of Integrated Objects, a provider of business object middleware.
- Softwright, with annual revenue of more than \$8 million, had more than 100 employees at the time of the acquisition.
- Softwright now operates as a wholly owned subsidiary of SSA.

During 1995, SSA also acquired two of its independent affiliates, SSA Northeast and Priority Systems, Inc., the remaining 15% minority interest in its Australian subsidiary (SSA Services Pty., Ltd.), 10% of its affiliate SSA Northwest, the BPCS division of a California affiliate (Exigent Computer Group), 100% of its Canadian affiliate (SSA Ontario), and certain assets of Transtech, Inc., a

professional services firm based in Naperville (IL).

Acquisitions made during fiscal 1994 include the following:

- In 1994, SSA acquired its Malaysian Business Affiliate, Ocean Information Systems (OIS). The business has been renamed SSA Malaysia.
- In 1994, SSA acquired the remaining 49% of SSA-DAT GmbH and the remaining 20% of SSA Italia, its direct operations in Germany and Italy, respectively.

Divestitures

In July 1995, SSA formed a strategic alliance with Harbinger Corporation whereby SSA sold its EDI software assets and the SSA EDI development organization in the Netherlands to Harbinger for 550,000 shares of Harbinger common stock and four million shares of Harbinger Zero Coupon Preferred stock.

- As part of the agreement, SSA was granted a license by Harbinger to market, sell, and support Harbinger's complete line of electronic commerce products.
- In August 1995, SSA purchased an additional 450,000 shares of Harbinger common stock.

In September 1994, SSA sold a 35% interest in SSA Mid-Atlantic, Inc., an associated company that was a 50% joint venture of SSA. SSA now has only 15% ownership of the venture.

Employees

As of October 31, 1995, SSA had approximately 2,025 employees, segmented as follows:

Sales, business consulting, marketing	550
Application consulting/ analysts	765
Technology—AS/400	150
Technology—Objects and UNIX	415
Finance and administration	<u>145</u>
	2,025

The company currently has approximately 2,200 employees.

Key Products and Services

To date, SSA has licensed approximately 100,000 software products in more than 10,000 installations worldwide.

BPCS Product Line

SSA's primary software product line—BPCS—consists of more than 40 integrated products designed for manufacturing, distribution, financial, electronic data interchange, and toolset applications.

Since mid-1995, SSA BPCS Client/Server has shipped the following products based on its new object computing architecture:

- Four Configurable Enterprise Financials (CEF) products—collectively known as Configurable Enterprise Accounting (CEA)
- Object Development Workbench object-oriented application development tools
- Supply chain management products

SSA products are now available for IBM AS/400 and UNIX versions for the IBM RS/6000, HP 9000, and Digital AlphaServer platforms.

Manufacturing products include the following:

- Master Production Scheduling (MPS) identifies future production and procurement actions that need to be taken in response to customer demand as well as day-to-day events and ties overall business planning to detail operations.
- Material Requirements Planning (MRP) identifies future production and procurement actions that are needed in response to day-to-day events and connects overall business planning to detail operations.
- Capacity Planning (CAP) allows production control to identify potential bottlenecks and backlog problems so that adjustments can be made.
- JIT (Just-in-time) provides support for just-in-time and repetitive manufacturing techniques and support for the make-to-schedule activities of process manufacturers.
- Manufacturing Data Management allows the definition and use of product structure and routing information for a variety of planning and costing needs.
- Advanced Process Industries contains features and functions essential to many process industry companies, including lot-level potency, batch balancing, physical versus theoretical quantities, container control and tracking, campaign planning, reverse balancing, full notes subsystems, lot tracking, and traceability.
- Configuration Management automates the configuration and order-entry processes that are executed relative to a customer request for a make-to-specification product.
- Shop Floor Control provides current status of jobs, work in process, and production

activity to permit performance evaluation, detailed planning, and scheduling.

- **Quality Management System (QMS)** implements quality assurance and quality control functions; it is integrated with production, procurement, and inventory control.
- **Laboratory Management System** provides enhanced capabilities to support the special requirements of quality assurance laboratories, including calculation of test results from multiple readings, laboratory equipment interface software, stability testing, and laboratory resource planning.
- **IWS Planner's Assistant** is a distributed database client/server application that supports planners who handle master production schedules and material requirements plans.
- **CIMPath™** automates data collection and updates from the plant floor or distribution center through a variety of scanners, magnetic card readers, hand-held devices, voice input, scales, and other devices.
- **Multi-Facility Support** allows configuration of BPCS/AS applications and transmission of operational data across a network of server computers and supports centralized and decentralized operating functions.
- **IWS Formulation Assistant** is a distributed database client/server application to support chemists, laboratory managers, and process engineers in the graphical definition of product and process formulations.
- **Work Order Scheduling and Control** automates the maintenance management information chain to ensure effective use, coordination, and tracking of resources.

- **Equipment Tracking** provides a database describing all facets of plant and facility equipment, including location and utilization history.
- **Preventive Maintenance Tracking** identifies and monitors preventive maintenance activities for maintenance-worthy items.
- **Component Tracking** is a subset of the equipment hierarchy, synchronized with the equipment database, that allows for identification of chronic repair problems and repair or replacement analysis for equipment components.
- **Maintenance Cost Tracking** is a tool that tracks repair and maintenance for total maintenance cost analysis and management.
- **Warranty Claims Tracking** maximizes all warranty reimbursements by providing an administrative system providing positive control of all items covered by manufacturer and vendor warranties.
- **MRO Parts Management** is designed to meet or exceed the requirements of purchasing and inventory control.

Supply Chain Management products include the following:

- **Customer Order Processing** processes entry and fulfillment of customer orders; provides automatic pricing and inventory allocation to decrease order fulfillment cycle times, reduce back orders, and provide information for production and accounting projections; and prints customer acknowledgments and shipping documents.
- **Inventory Management** allows users to obtain information for planning and control of finished goods, work in process, and raw

material inventory and provides summary and detail analysis on demand for accounting and production control purposes.

- Warehouse Management System automates the warehouse distribution process, from receiving and putaway to picking and deployment.
- Distribution Resources Planning (DRP) identifies demand on distribution centers and the resulting impact on resupply facilities, and presents transportation loading and scheduling information.
- Billing and Sales Analysis allows customer orders to be billed after shipment, with invoices printed and inventory, sales, and accounting information maintained automatically.
- Forecasting provides statistical forecasts of future customer sales.
- Purchasing links planning, requisitioning, receiving, and inspection to inventory stocks to permit evaluation of vendors and purchasing performance and prints purchase orders and receiving documents.
- Promotions and Deals provides advanced functions for managing marketing and promotion programs.
- Sales Performance Management is a sales management tool that combines sales and order data with budget and planning information.
- User Performance Measurement provides feedback and accountability in several key management areas to executives in order to allow them to monitor the performance of their business against plan.

- Release Management handles contracts, blanket orders, cumulative quantities, daily adjustments, and delivery sequence schedules.

Financial products include the following:

- Configurable Ledger provides user-defined financial reporting, allows for accumulation of financial information to support accounting functions, and allows analysis of information for management decision-making.
- Accounts Payable controls and processes payables information.
- Accounts Receivable collects and disseminates cash flow information aimed at accelerating collection, assessing credit, and reducing bad debt.
- Advanced Remittance Processing automatically applies receipts to invoices for bank lockbox processing, posts payments against invoices, and reconciles payments to invoices.
- Credit and Deductions Management evaluates customer credit status to help credit and sales managers review customer credit worthiness.
- Multiple Currencies provides multiple currency operations for the financial, inventory, order processing, billing, and sales applications.
- Configurable Currency Translation consolidates, reports, and analyzes multiple currency financial data.
- Enterprise Structures and Consolidations provides extensive reporting and analysis of operating results, as well as consolidation features.

- Advanced Budgeting and Analysis allows users to perform extensive allocations and establish and maintain unlimited budgets for each reporting unit.
- Draft Management provides advanced features for handling bank drafts, letters of credit, and notes receivable and payable.
- Fixed Assets (U.S. and Canada only) manages and controls all types of property, plant and equipment.
- Cost Accounting provides control of purchasing and manufacturing costs.

User Vision, SSA's retrieval product, is an enterprise-wide client/server information retrieval solution for BPCS.

Interoperable Tool Set Products

SSA's toolset products are collectively known as Object Development Workbench.

- IWS (Intelligent Workstation) is a multitasking workstation-based application definition facility that operates either detached from or attached to the server and that uses a graphical user interface.
- INT (Integrator) integrates Gen/RPG and selected front-end workstation-based CASE tools.
- UCI (Upper CASE Integration) controls and monitors the sharing of CASE constructs between multiple developers and platforms, acting as the librarian for CASE design objects between server and IWS local microcomputer repositories.
- Gen/RPG accelerates the process of design, generation, and maintenance of application software for the AS/400 environment.

- Gen/HPUX regenerates applications to run within UNIX-based environments.
- Gen/AIX assures successful fast-path migration to the tools paradigm.
- RSD (Rapid Systems Development) is a rapid systems development methodology that enables information systems to be developed in shorter cycle times.

The entire BPCS product line is available in English, Arabic, Ideographic Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Ideographic Japanese, Korean, Polish, Portuguese, Russian, Spanish, and Swedish.

Client Services

SSA supports its clients through a worldwide client service network that consists of more than 700 direct support staff located at SSA's regional headquarters and branch operations, as well as more than 3,000 additional professionals dedicated to supporting SSA clients in SSA's affiliate business partner network.

HelpLine, SSA's international 24-hour telephone support service, also supports subscribing SSA clients.

SSA's Automotive Global Center of Excellence, which opened in Detroit (MI) in January 1996, provides a state-of-the-art technology environment where clients, prospects, and partners can work with SSA's automotive business consultants to apply BPCS Client/Server to automotive clients' business requirements. SSA also has similar centers in the U.K. and Germany.

Clients

SSA products are in more than 10,000 installations.

A sampling of clients includes Canon Europa NV, Pharmacia & Upjohn, Inc., Maple Leaf Foods, Tatung U.K. Ltd., Mother Parker's Tea and Coffee, SmithKline Beecham, IT Fluid Technology, ICI Paints, Hitachi, Accounting Center of China Aviation, United Distillers, Moulinex Group, Siderur-Siderurgica del Turbio S.A., Matsushita Electric, S.C. Johnson, Air Products, Kimberly Clark, Epson, and Dresser Industries.

Marketing and Sales

SSA sells and supports its products through a distribution network consisting of branch offices, a major accounts organization, and an affiliate network of independent software and service firms.

- SSA has a major accounts organization in-house that coordinates sales and support to larger corporations to better deal with the special needs of the multisite and multinational customer via some 50 SSA offices worldwide. SSA's major accounts strategy includes following up leads generated by its affiliates as well as generating contacts at the corporate level.
- On December 1, 1995, SSA had more than 90 affiliate business partners. Affiliates are responsible in their respective territories for marketing and selling SSA's products and for providing the professional services required for implementation, such as education, project management, and customization. SSA provides technical, applications, and sales training; marketing and technical support; and emergency customer service to the affiliates.
- SSA also distributes its products through its regional and branch offices. The branch offices operate as district or country sales and service or sales support offices similar

to the affiliates, but under the direct control of SSA.

Alliances

In July 1996, SSA and CAP Gemini formed a global alliance to help multinational companies reengineer their business processes and reshape their IT systems. SSA will provide BPCS Client/Server and Enterprise Resource Planning software and CAP Gemini will provide business process reengineering and packaged implementation skills.

In July 1996, SSA and IBM announced an agreement for IBM to establish a BPCS Client/Server implementation and reengineering service line in Europe, complementing the practice in Atlanta (GA).

In February 1996, SSA announced an agreement with AT&T Solutions to provide the world's largest businesses with enterprise process redesign, business consulting, systems integration and implementation services, networking, and outsourcing services.

- SSA will train and certify AT&T Solutions' consultants on its BPCS Client/Server applications and DOCA technologies.
- AT&T Solutions will provide a range of consulting that includes BPCS-based enterprise business process redesign and implementation, including network infrastructure and support capabilities.

In April 1996, SSA and i2Technologies announced a partnership to deliver integrated supply chain and multimode manufacturing capabilities using SSA's BPCS Client/Server and DOCA technologies and i2's Rhythm products.

In July 1994, SSA formed an agreement with Service Systems International, Ltd. (SSI) of Kansas to market SSI service management

software—SSI S2000—to industrial businesses as part of a complete SSA enterprise software solution. The solution is sold as the BPCS Service Management System.

In April 1994, SSA announced a worldwide product development and marketing relationship with IBM. The agreement provides SSA with assistance in extending its software to the IBM RS/6000 family of UNIX-based workstations and servers and establishes jointly developed marketing programs that address specific industrial markets.

In March 1993, SSA announced that it had formed a marketing and development alliance with Bachman Information Systems, Inc. to provide IBM AS/400 customers with an analysis tool for integrating computer-aided software engineering (CASE).

In February 1993, SSA announced that it had been named an IBM Business Partner—Cooperative Software Supplier. Under the terms of the agreement, IBM's U.S. direct sales force markets and sells SSA's complete line of software products that run on the IBM AS/400 computer.

Other SSA partners include Hewlett-Packard, Digital Equipment, Price Waterhouse,

Coopers & Lybrand, Technology Solutions Company (TSC), Ernst & Young, Deloitte & Touche, Informix, Grant Thornton, and Whitman-Hart.

Competitors

SSA's primary competitors for its BPCS product line include IBM/Marcam (MAPICS), American Software, Computer Associates (ASK Computer Systems), SAP, and J.D. Edwards.

CASE competitors include Synon, Lansa, and Progress Software.

INPUT Assessment

SSA's strengths include its broad product offerings, applications development and systems management product capabilities, strong distribution network, and broad international customer base. SSA also has good customer support capability, based on a staff of more than 500 SSA professionals plus more than 3,000 support consultants in its Affiliate Business Partner network.

Challenges for SSA include increasing its share of the UNIX open systems market in addition to its traditional AS/400 market, dealing with pricing pressures in the open systems environment, and expanding its client/server product offerings.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

July 1995

System Software Associates, Inc. (SSA)

**President
& COO:** Terence H. Osborne
Chairman, & CEO: Roger E. Covey
500 West Madison
32nd Floor
Chicago, IL 60661
Phone: (312) 258-6000
Fax: (312) 474-7500

Status:	Public
Employees:	1,800 (12/94)
Revenue:	\$ 334,400,000
Fiscal Year End:	10/31/94

Key Points

- System Software Associates (SSA) offers an integrated line of business applications software, computer-aided systems engineering (CASE) tools, preventive maintenance applications and electronic data interchange (EDI) products for AS/400, RS/6000 and HP 9000 servers.
- In October 1994, Roger E. Covey returned to the position of Chairman and CEO of SSA. Mr. Covey held the post of SSA's Chairman, CEO and President from December 1981 to August 1991. Mr. Larry J. Ford was the Chairman and CEO from August 1991 until October 1994.
- In June 1995, SSA announced the shipment of four new Configurable Enterprise Financials (CEF) products as part of its BPCS (Business Planning and Control System) Client/Server product line.

- In 1994, SSA announced the availability of BPCS for Windows™, a client/server version of BPCS.

Company Description

SSA, founded in 1981, develops, markets and supports four software product lines as follows:

- BPCS consists of more than 40 integrated software products for manufacturing, financial, electronic data interchange, distribution management and toolset applications.
- AS/SET (Application System, Solution Engineering Technology), SSA's CASE product line, is designed to help users develop and maintain applications.
- EDI/SET, SSA's EDI product line, allows for computer-to-computer exchange of business transactions between vendors and suppliers.
- The Main/Tracker product line, acquired with Elke in 1993, helps organizations track and manage the maintenance of equipment, facilities and vehicles.

SSA markets, sells and services its products primarily through three distribution channels: a direct major accounts organization; a network of 150 independent software companies (affiliates) that sells and supports the products from affiliates' offices in 70 countries; and 6 regional headquarters and 26 branch offices in the U.S. and abroad.

Structure and Operations

SSA has 40 direct sales offices worldwide and 140 BPCS support centers in over 70 countries.

SSA's North American operations include 6 direct sales offices, 30 support centers and 20 affiliates. SSA has a local presence in more

than three dozen other North American cities through its BPCS and AS/SET affiliates.

SSA has 12 offices, 56 support centers and 40 affiliates in Europe, Middle East and Africa. SSA's European affiliates are comprised mostly of IBM agents.

SSA's Asia/Pacific operations consist of 18 offices, 24 affiliates and 32 support centers. It is headquartered in Singapore, and has affiliates in Malaysia, Thailand, Indonesia, Sri Lanka, Hong Kong, Taiwan, Korea, China, Japan, Australia, Papua New Guinea, Fiji and the Philippines.

SSA Latin America is headquartered in Buenos Aires and has 40 offices, 17 affiliates and 22 support centers.

Company Strategy

SSA's product strategy incorporates a cooperative processing architecture, compliance with IBM's SAA, graphic user interface capabilities, client/server technologies and seamless integration to other technologies.

The company's software development strategy includes:

- Addressing the complete spectrum of enterprise business system requirements with fully integrated products
- Offering one family of products worldwide, suitable for all localities and regulatory requirements
- Employing client/server technology throughout all product offerings
- Engineering products for the user that are easy-to-learn

- Providing scalability to meet the needs of small, medium and large businesses

SSA is supporting an open systems strategy and is moving all its product lines to a configurable, object-based architecture that runs on multiple hardware platforms, including the IBM AS/400 as well as UNIX-based IBM RS/6000 and HP 9000 business systems.

SSA is changing its organizational structure from a regional to a country focus. SSA's strategy is to increase its global presence by gaining an SSA country operation in strategic markets, and then seek additional business partners with increased emphasis on joint ventures.

Financials

SSA's fiscal 1994 revenue reached \$334.4 million, a 27% increase over fiscal 1993 revenue of \$263.4 million. Net income was \$15.4 million, a 34% decrease from \$23.4 million in fiscal 1993.

- General and administrative expenses increased 41% during fiscal 1994, as compared to a 27% increase during fiscal 1993. This rise in expenses was due to the company's expansion efforts worldwide.
- Research and development expenses increased 53% from 1993 to 1994, compared to a 39% increase from 1992 to 1993. This steep increase was due to the development of new products and enhancement of existing ones.

System Software Associates, Inc. Five-Year Financial Summary (\$ Millions, except per share data)

Item	Fiscal Year				
	10/94	10/93	10/92	10/91	10/90
Revenue	\$334.4	\$263.4	\$228.8	\$146.0	\$108.5
• Percent increase from previous year	27%	15%	(a) 57%	35%	20%
Income before taxes	\$23.8	\$35.7	\$41.6	\$23.8	\$13.7
• Percent increase (decrease) from previous year	(33%)	(14%)	75%	74%	N/A
Net income	\$15.4	\$23.4	\$26.6	\$15.4	\$8.8
• Percent increase (decrease) from previous year	(34%)	(12%)	(a) 73%	75%	(5%)
Earnings per share	\$0.57	\$0.86	\$0.99	\$0.58	\$0.33
• Percent increase (decrease) from previous year	(34%)	(13%)	(a) 71%	76%	(6%)

(a) Includes a nonrecurring benefit (\$10.4 million of revenue; \$5.1 million of net income; \$0.19 per share) related to the adoption of mandatory revenue recognition procedures.

SSA management attributes fiscal 1994 results to the following:

- License fees grew 28% in fiscal 1994, after a 5% growth in fiscal 1993. This was largely due to a growth in the AS/400 market and an improved economy.
- Client services revenue grew 26% in fiscal 1994, following a 50% increase during fiscal 1993. SSA has targeted generating 30% of revenue from services and 70% from licenses.
- All geographic areas experienced growth over the past three years.

Research and development expenses were approximately \$35.1 million (11% of revenue) in fiscal 1994, \$37.3 million (14% of revenue) in fiscal 1993 and \$26.1 million (11% of revenue) in fiscal 1992. These amounts include software development costs that were capitalized.

Interim Results

Revenue for the three months ending April 30, 1995 reached \$161.7 million, a 17% increase over \$138.4 million for the same period in 1994. Net income rose 58%, from \$3.8 million to \$6.0 million.

Market Financials

SSA's revenue is derived primarily from the discrete manufacturing, process manufacturing, and distribution industries.

The target markets for the BPCS product line are industrial sector firms with annual revenues greater than \$50 million. Clients cover the entire industrial sector, which spans many industries, including chemicals and pharmaceuticals; food, beverage and tobacco; consumer products, automotive, electronics and instrumentation; and plastics and machinery.

BPCS has an installed base of over 7,000 client implementations.

Main/Tracker is marketed to industrial sector businesses, schools, hospitals and construction firms.

The target market for SSA's AS/SET CASE products consists of BPCS target customers as well as other users with a need to develop customized software tools.

The EDI products are marketed to the BPCS and AS/SET marketplaces.

Revenue Source by Product/Service

Approximately 72% of SSA's fiscal 1994 revenue was derived from applications software product license fees and 28% from client support services.

A three-year source of revenue summary appears on the following page.

System Software Associates, Inc.
Three-Year Source of Revenue Summary
 (\$ Millions)

	Fiscal Year					
	10/94		10/93		10/92	
Product/Service	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Software license fees	\$239.5	72%	\$187.9	71%	\$178.5	78%
Client services and other (a)	94.9	28%	75.5	29%	50.3	22%
Total	\$334.4	100%	\$283.4	100%	\$228.8	100%

(a) Includes hardware sales of approximately \$2.3 million in fiscal 1992.

Geographic Markets

Approximately 40% of SSA's fiscal 1994 revenue was derived from the U.S. The remaining 60% was derived from various international sources, including \$36.4 million

(11% of revenue) from sales made from the U.S. to other geographic markets.

A three-year summary of geographic source of revenue follows:

System Software Associates, Inc.
Three-Year Geographic Source of Revenue Summary
 (\$ Millions)

	Fiscal Year					
	10/94		10/93		10/92	
Geographic Markets	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$129.2	39%	\$81.3	31%	\$68.2	30%
Europe/Middle East	113.7*	34%	98.6	38%	85.8	38%
Asia/Pacific	9.9	3%	16.5	6%	17.2	7%
Canada/Latin America	9.9	3%	14.0	5%	12.4	5%
Other	71.7	21%	52.8	20%	45.2	20%
Total	\$334.4	100%	\$263.4	100%	\$228.8	100%

* 1994 revenue includes Africa, in addition to Europe and Middle East

SSA has well-established operations in all major international markets, including Brazil, Mexico, Argentina, Italy, France, Spain, Germany, the Netherlands, the U.K., Australia, Singapore, Japan and China.

Acquisitions

During fiscal 1994 and 1993, SSA expanded its global coverage through the following acquisitions:

- In 1994, SSA acquired its Malaysian Business Affiliate, Ocean Information Systems (OIS).
- OIS had 42 employees at the time of the acquisition and operations in both Kuala Lumpur and Penang.
- The business has been renamed SSA Malaysia.
- In 1994, SSA acquired the remaining 49% of SSA-DAT GmbH and the remaining 20% of SSA Italia, its direct operations in Germany and Italy respectively.
- In October 1993, SSA acquired the remaining interest in Solid Beheer B.V., a Dutch company that develops and supports SSA's EDI products. SSA originally entered into a joint venture with Solid Beheer in 1991.
- In September 1993, SSA acquired its Mexican affiliate and renamed the business SSA de Mexico. The acquired company was SSA's largest affiliate serving manufacturers and distributors in Latin America with software and consulting services.
- In August 1993, SSA acquired Elke Corp. of Plymouth (MN) for 300,000 shares of SSA common stock valued at about \$6.4 million. Although the acquisition was accounted for

as a pooling of interests, SSA's financials prior to the acquisition were not restated.

- Elke is a leading provider of the Main/Tracker product line for tracking and managing the maintenance of equipment, facilities and vehicles to industrial sector businesses and organizations such as schools, hospitals and construction firms.
- Elke had approximately 50 employees at the time of the acquisition, annual revenue of about \$4 million and approximately 2,500 customers using its Main/Tracker products.
- Elke has been renamed SSA/Elke.

Divestitures

In September 1994, SSA sold a 35% interest in SSA Mid-Atlantic, Inc., an associated company which was a 50% joint venture of SSA. SSA now has only 15% ownership of the venture.

Employees

As of December 31, 1994, SSA had approximately 1,800 employees. About 500 of these work in customer support.

Key Products and Services

To date, SSA has licensed approximately 100,000 software products in more than 10,000 installations worldwide.

BPCS Product Line

SSA's primary software product line—BPCS—consists of more than 40 integrated products designed for manufacturing, distribution, financial, electronic data interchange and toolset applications.

- In June 1995, SSA began shipping BPCS Client/Server products based on its new object computing architecture. The company introduced four new Configurable Enterprise Financials (CEF) products—collectively known as Configurable Enterprise Accounting (CEA)—as part of this product line.
 - BPCS Configurable Ledger—A financial repository
 - BPCS Configurable Currency Translation—Supports multiple currency vendor and customer processing
 - BPCS Enterprise Structures and Consolidations—Reports and analyzes operational results
 - BPCS Advanced Budgeting and Analysis—Allows users to establish and maintain unlimited budgets and books for each reporting unit
- In May 1994, SSA announced a group of six products for the HP 9000.

Manufacturing products include the following:

- Master Production Scheduling (MPS) identifies future production and procurement actions that need to be taken in response to customer demand as well as day-to-day events and ties overall business planning to detail operations.
- Material Requirements Planning (MRP) identifies future production and procurement actions that are needed in response to day-to-day events and connects overall business planning to detail operations.
- Capacity Planning allows production control to identify potential bottlenecks and backlog problems so that adjustments can be made.
- JIT (Just-in-time)/Repetitive Manufacturing provides support for just-in-time and repetitive manufacturing techniques and support for make-to-schedule activities of process manufacturers.
- Manufacturing Data Management allows the definition and use of product structure and routing information for a variety of planning and costing needs.
- Advanced Process Industries contain features and functions essential to many process industry companies, including lot-level potency, batch balancing, physical versus theoretical quantities, container control and tracking, campaign planning, reverse balancing, full notes subsystems, lot tracking and traceability.
- Configuration Management automates the configuration and order-entry processes that are executed relative to a customer request for a make-to-specification product.
- Shop Floor Control provides current status of jobs, work-in-process and production activity to permit performance evaluation, detailed planning and scheduling.
- Quality Management System (QMS) implements quality assurance and quality control functions; integrated with production, procurement and inventory control.
- Planner's Assistant is a distributed database client/server application that supports planners who handle master production schedules and material requirements plans.

- CIMPath™ automates data collection and updates from the plant floor or distribution center through a variety of scanners, magnetic card readers, hand-held devices, voice input, scales and other devices.
- Multiple Facility Support allows configuration of BPCS/AS applications and transmission of operational data across a network of server computers and supports centralized and decentralized operating functions.
- Formulation Assistant is a distributed database client/server application to support chemists, laboratory managers and process engineers in the graphical definition of product and process formulations.
- Work Order Scheduling and Control
- Equipment Tracking establishes and maintains foundation data for all maintenance management activities.
- Component Tracking manages information about equipment components, including automatic tracking of component service life, spare components and repair/exchange histories.
- Preventive Maintenance Tracking schedules all preventive, predictive and corrective maintenance, repair and overhaul (MRO) tasks, plus safety inspections and planned component replacements. Preventive maintenance is scheduled automatically on the basis of user-defined units of equipment use.
- Maintenance Cost Tracking reports monthly actual repair costs for the life of each facility or equipment unit, with breakdown by month and year.

- Maintenance Manager's Assistant is a workstation-based tool that supports user-defined MRO performance measurements and targets, analyzes trends in historical MRO performance and identifies problem areas for follow-up action.

Supply Chain Management products include the following:

- Order Processing processes entry and fulfillment of customer orders; provides automatic pricing and inventory allocation to decrease order fulfillment cycle times, reduce back orders and provide information for production and accounting projections; and allows prints customer acknowledgments and shipping documents.
- Inventory Management allows users to obtain information for planning and control of finished goods, work-in-process and raw material inventory and provides summary and detail analysis on demand for accounting and production control purposes.
- Warehouse Management automates the warehouse distribution process, from receiving and putaway to picking and deployment.
- Distribution Resources Planning (DRP) identifies demand on distribution centers and resulting impact on resupply facilities and presents transportation loading and scheduling information.
- Billing and Sales Analysis allows customer orders to be billed after shipment, with invoices printed and inventory, sales and accounting information maintained automatically.
- Purchasing links planning, requisitioning, receiving and inspection to inventory stocks to permit evaluation of vendors and

purchasing performance and prints purchase orders and receiving documents.

- Forecasting provides for statistical forecasts of future customer sales.
- Promotions and Deals provides advanced functions for managing marketing promotion programs.
- Sales Performance Management is a sales management tool that combines sales and order data with budget and planning information.
- Performance Measurement provides feedback and accountability in several key management areas to executives in order to allow them to monitor performance of their business against plan.

Financial products include the following:

- General Ledger and Financial Retrieval System provides user-defined financial reporting, allows for accumulation of financial information to support accounting functions, and allows analysis of information for management decision-making.
- Accounts Payable provides for the control and processing of payables information.
- Accounts Receivable collects and disseminates cash flow information aimed at accelerating collection, assessing credit and reducing bad debt.
- Advanced Remittance Processing automatically applies receipts to invoices for bank lockbox processing, posts payments against invoices and reconciles payments to invoices.

- Credit and Deductions Management evaluates customer credit status to help credit and sales managers review customer credit worthiness.
- Multi-Currency provides multiple currency operations for the financial, inventory, order processing, billing and sales applications.
- Currency Translation allows consolidation, reporting and analysis of multiple currency financial data.
- Fixed Assets (U.S. and Canada only) manages and controls all types of property, plant and equipment.
- Financial Analyst's Assistant is a distributed database client/server application providing user-tailored analysis of financial performance.
- Cost Accounting provides activity-based control of purchasing, shop order, production schedule and overhead costs and full multiplant and multifacility costing.
- Cash Management provides features for handling bank drafts, letters of credit and notes receivable and payable.

User Vision, SSA's retrieval product, is an enterprise-wide client/server information retrieval solution for BPCS.

SSA Tool Set Products

SSA's AS/SET CASE tools are used to develop and maintain applications on the AS/400, RS/6000 and NT servers.

- SSA has enhanced AS/SET to generate platform-independent, business-critical applications for a range of business systems, including the HP 9000, IBM RS/6000 and NT servers.

- To date, SSA's CASE products have been installed at more than 1,600 installations worldwide.

SSA currently offers the following CASE software products:

- AS/SET IWS (Intelligent Workstation) is a multitasking workstation-based application definition facility that operates either detached from or attached to the server.
- AS/SET UCI (Upper CASE Integration) controls and monitors the sharing of CASE constructs between multiple developers and platforms, acting as the librarian for CASE design objects between server and IWS local microcomputer repositories.
- AS/SET ADK (AS/400 Development Kernel) accelerates the process of design, generation and maintenance of applications software for the AS/400 environment.
- AS/SET INT (Integrator) integrates AS/SET ADK and selected front-end workstation-based CASE tools, including KnowledgeWare and Bachman products.
- AS/SET UDK (UNIX Development Kernel) regenerates applications to run within UNIX-based environments.
- AS/SET AIM assures successful fast-path migration to the AS/SET paradigm.
- AS/SE RSD is a systems development methodology for development of information systems in shorter cycle times.

EDI Products

SSA's EDI/SET products enable computer-to-computer exchange of business transactions between vendors and suppliers.

- EDI/SET SCK (Standards Compliance Kernel) is an EDI translation and communication product. It supports the translation of EDI messages according to national and international standards and customization for proprietary message requirements. Standards supported include ANSI X12, EDIFACT, UCS, CISCO, Odette and Tradacoms.
- EDI/SET ANK (Advanced Networking Kernel) provides the link between EDI/SET SCK translator and external value-added networks and supports communication setup, connection-type maintenance, network administration and system report retrieval functions.
- EDI/SET IDK (Integration Development Kernel) is a high-level development tool to provide integration of EDI messages with business enterprise systems.

The entire BPCS product line is available in English, Arabic, Ideographic Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Ideographic Japanese, Korean, Polish, Portuguese, Russian, Spanish and Swedish.

Maintenance Management Products

Main/Tracker, is a preventive maintenance system that automates the planning and control of all equipment and facilities maintenance, safety inspections and warranty tracking.

- Main/Tracker runs on AS/400 computers. Its capabilities are integrated with BPCS/AS applications.
- There are currently more than 2,500 client implementations of Main/Tracker in North America, Europe, Latin America and Asia.

Main/Tracker modules are as follows:

- MRO Parts Management maintains information unique to the spare parts inventory.
- MRO Work Order Scheduling and Control manages the MRO work request backlog, then launches and controls MRO work orders.
- Automated Data Collection performs the data collection process for all facilities management tasks and supports the use of bar code reading devices.
- Warranty Claims Tracking keeps track of warranty, generates and tracks warranty claim documents, tracks warranty claim collections and keeps an on-line history of warranty activity.

Client Services

SSA supports its clients through a worldwide client service network that consists of more than 500 direct support staff located at SSA's regional headquarters and branch operations as well as more than 3,000 additional professionals, dedicated to supporting SSA clients, in SSA's Affiliate Business Partner network.

HelpLine, SSA's international 24-hour telephone support service, also supports subscribing SSA clients.

SSA also offers the following implementation programs:

- BPCS/AS Advanced Systems Implementation Strategy (BASIS) is SSA's proprietary fast-track implementation methodology for information systems.
- AS/SET Accelerated Implementation Methodology (AIM) is SSA's fast-track CASE implementation methodology. It is a detailed roadmap, laying out the phases, steps, deliverables and organization required to successfully implement CASE.
- EDI/SET Rapid Electronic Data Implementation Methodology (REDI) is SSA's EDI implementation methodology.

Marketing and Sales

SSA sells and supports its products through its affiliate network, a major accounts organization and regional headquarters and branch offices.

- SSA has a major accounts organization in-house that coordinates sales and support to larger corporations to better deal with the special needs of the multisite and multinational customer via 40 SSA offices worldwide. SSA's major accounts strategy includes following up leads generated by its affiliates as well as generating contacts at the corporate level.
- On December 15, 1994, SSA had 150 affiliate business partners with offices in over 70 countries. Affiliates are responsible in their respective territories for marketing and sales and implementation services, including education, project management and customization. SSA provides technical, applications and sales training; marketing and technical support; and emergency customer service to the affiliates.
- SSA also distributes its products through its 6 regional and 26 branch offices. The branch offices operate as district or country sales and service or sales support offices similar to the affiliates but under the direct control of SSA.

Alliances

In August 1994, SSA was selected as a worldwide enterprise software partner by Packard Bell to provide installation of BPCS products at six Packard Bell manufacturing and distribution sites over the next three years. In addition, SSA will provide education and support to Packard Bell.

In July 1994, SSA formed an agreement with Service Systems International, Ltd. (SSI) of Kansas, to market SSI service management software—SSI S2000—to industrial businesses as part of a complete SSA enterprise software solution. The solution is sold as the BPCS Service Management System.

In April 1994, SSA announced a worldwide product development and marketing relationship with IBM. The agreement provides SSA with assistance in extending its software to the IBM RS/6000 family of UNIX-based workstations and servers and establishes jointly developed marketing programs that address specific industrial markets.

In March 1993, SSA announced that it had formed a marketing and development alliance with Bachman Information Systems, Inc. to provide IBM AS/400 customers with an analysis tool for integrating computer-aided software engineering (CASE).

In February 1993, SSA announced that it had been named an IBM Business Partner—Cooperative Software Supplier. Under the terms of the agreement, IBM's U.S. direct sales force markets and sells SSA's complete line of software products that run on the IBM AS/400 computer.

Competitors

SSA's primary competitors for its BPCS/AS product line include IBM/Marcam (MAPICS), American Software, Andersen Consulting, Computer Associates (ASK Computer Systems), SAP and J.D. Edwards.

Main/Tracker competitors include Marcam and J.D. Edwards.

CASE competitors include Synon, Lansa and Progress Software.

EDI competitors include Sterling Software (Electronic Commerce Group) and Premenos.

INPUT Assessment

SSA's strengths include its broad product offerings, applications development and systems management product capabilities, strong distribution network and broad international customer base. SSA also has a customer support capability based on a staff of more than 500 SSA professionals plus more than 3,000 support consultants in its Affiliate Business Partner network.

Challenges for SSA include increasing its share of the UNIX open systems market in addition to its traditional AS/400 market, dealing with pricing pressures in the open systems environment and expanding its client/server product offerings.

Company Profile

A Publication from INPUT's Vendor Analysis Program

April 1994

System Software Associates, Inc. (SSA)

**Chairman, President
& CEO:**

Larry J. Ford

**500 West Madison
32nd Floor
Chicago, IL 60661
Phone:
Fax:**

**(312) 258-6000
(312) 474-7500**

Status:	Public
Employees:	1,700
Revenue:	\$ 263,400,000
Fiscal Year End:	10/31/93

Key Points

- System Software Associates (SSA) offers an integrated line of business applications software, computer-aided systems engineering (CASE) tools, preventive maintenance applications and electronic data interchange (EDI) products for AS/400, RS/6000 and HP 9000 servers.
- In June 1993, SSA unveiled an open systems strategy and targeted the second quarter of 1994 for shipment of a new version of the company's flagship product line BPCS/AS (Business Planning and Control System/Advanced Solution). The new strategy includes platform independence (with support for the IBM AS/400 as well as UNIX platforms such as IBM RS/6000 and HP 9000 systems) in addition to configurable processes that can be customized according to each customer's needs.

- In February 1994, SSA announced full support for open client/server computing environments for its BPCS/AS software applications and AS/SET CASE tools. These new offerings are scheduled for general release in the second quarter of 1994.
- During fiscal 1993, acquisitions of majority interests in affiliates in Germany and Mexico reflect the continuation of SSA's geographic expansion. During the past two years, SSA has also increased its Affiliate Business Partner Network from 120 to 151 worldwide.
- During the year, SSA also acquired two product line businesses—Elke Corp., a leading provider of software for tracking and managing maintenance of equipment, facilities and vehicles; and Solid Beheer B.V., a Dutch company that develops and supports SSA's EDI products.

Company Description

SSA, founded in 1981, develops, markets, and supports four software product lines as follows:

- BPCS/AS consists of more than 60 integrated software products for manufacturing, financial and distribution management applications for midrange computers.
- The Main/Tracker product line, acquired with Elke in 1993, helps organizations track and manage the maintenance of equipment, facilities and vehicles.
- AS/SET (Application System, Solution Engineering Technology), SSA's CASE product line, is designed to help users develop and maintain applications.
- EDI/SET, SSA's EDI product line, allows for computer to computer exchange of business transactions between vendors and suppliers.

SSA markets, sells and services its products primarily through three distribution channels: a direct major accounts organization; a network of 151 independent software companies (affiliates) that sells and supports the products from affiliates' offices in 68 countries; and 6 regional headquarters and 26 branch offices in the U.S. and abroad.

Structure and Operations

SSA's North American direct sales offices are in Chicago, Atlanta, Boston, and Milwaukee. SSA has a local presence in more than three dozen other North American cities through its BPCS and AS/SET affiliates.

SSA Europe, headquartered in the U.K., also has branch operations in France, Germany, Italy, Spain, and the Netherlands with additional SSA staff located in Sweden. SSA Europe also has 40 affiliates, comprised mostly of IBM agents.

SSA Pacific has direct sales offices in Sydney, Melbourne, and New Zealand and seven affiliates in other parts of Australia, Papua New Guinea and Fiji.

SSA Japan, headquartered in Tokyo, has offices in Tokyo and 28 affiliates.

SSA Asia, headquartered in Singapore, also has 28 affiliates in Malaysia, Thailand, Indonesia, Sri Lanka, Hong Kong, Taiwan, Korea, China and the Philippines.

SSA Latin America is headquartered in Buenos Aires and has a satellite office in San Juan, Puerto Rico.

Company Strategy

SSA's product strategy incorporates a cooperative processing architecture, compliance with IBM's SAA, graphic user interface capabilities, client/server technologies and seamless integration to other technologies.

In 1994, SSA will spend more than \$35 million in research and development. The company's software development strategy includes:

- Addressing the complete spectrum of enterprise business system requirements with fully integrated products
- Offering one family of products worldwide, suitable for all localities and regulatory requirements
- Employing client/server technology throughout all product offerings
- Engineering products for the user that are easy-to-learn

- Providing scalability to meet the needs of small, medium and large businesses

SSA is supporting an open systems strategy and is moving all its product lines to a configurable, object-based architecture that runs on multiple hardware platforms, including the IBM AS/400 as well as UNIX-based IBM RS/6000 and HP 9000 business systems.

SSA is changing its organizational structure from a regional to a country focus. SSA's strategy is to increase its global presence by gaining an SSA country operation in strategic markets, and then seek additional business partners with increased emphasis on joint ventures.

Financials

SSA's fiscal 1993 revenue reached \$263.4 million, a 15% increase over fiscal 1992 revenue of \$228.8 million. Net income was \$23.4 million, compared to net income of \$26.6 million in fiscal 1992.

- Fiscal 1992 results include a non-recurring benefit (\$10.4 million of revenue, \$5.1 million of net income and \$0.19 per share) related to the adoption of certain mandatory revenue recognition procedures.
- Excluding this nonrecurring benefit, fiscal 1993 revenue and net income rose 21% and 9%, respectively, from comparative prior-year results.

System Software Associates, Inc.
Five-Year Financial Summary
 (\$ Millions, except per share data)

Item	Fiscal Year			
	10/93	10/92	10/91	10/90
Revenue	\$263.4	\$228.8	\$146.0	\$108.5
• Percent increase (decrease) from previous year	15%	(a) 57%	35%	20%
Income (loss) before taxes	\$35.7	\$41.6	\$23.8	\$13.7
• Percent increase (decrease) from previous year	(14%)	75%	74%	N/A
Net income (loss)	\$23.4	\$26.6	\$15.4	\$8.8
• Percent increase (decrease) from previous year	(12%)	(a) 73%	75%	(5%)
Earnings (loss) per share	\$0.86	\$0.99	\$0.58	\$0.33
• Percent increase (decrease) from previous year	(13%)	71%	76%	(6%)

(a) Includes a nonrecurring benefit (\$10.4 million of revenue; \$5.1 million of net income; \$0.19 per share) related to the adoption of mandatory revenue recognition procedures.

SSA management attributes fiscal 1993 results to the following:

- License fees grew only 5% in 1993 after a 53% growth in 1992, reflecting slower growth in the AS/400 market and a depressed economic environment. Alliance Partner products (software products either developed by, or in conjunction with, third parties) are used by SSA to provide clients with a complete selection of product functionality to meet their enterprise solution needs. These products contributed 8% to SSA's software license revenues in 1993, up from insignificant levels in prior years.
- Client services revenue has grown rapidly, up 50% and 72% over the prior

year in 1993 and 1992, respectively, as returns of SSA's global investments in personnel and service offerings are realized. SSA has targeted generating 30% of revenue from services and 70% from licenses.

- All geographic areas experienced growth over the past three years.

Research and development expenses were approximately \$37.3 million (9% of revenue) in fiscal 1993, \$26.1 million (7% of revenue) in fiscal 1992 and \$15.1 million (7% of revenue) in fiscal 1991. These amounts include software development costs that were capitalized.

Interim Results: Revenue for the three months ending January 31, 1994 reached \$66.4 million, a 37% increase over \$48.6

million for the same period in 1993. Net income rose 33%, from \$0.9 million to \$1.2 million.

Market Financials

SSA's revenue is derived primarily from the discrete manufacturing, process manufacturing, and distribution industries.

The target markets for the BPCS/AS product line include: manufacturers with annual revenues ranging from \$50 million to \$200 million; distributors with annual revenues ranging from \$10 million to \$500 million; and manufacturers with annual revenues greater than \$200 million. The larger companies are often looking for common systems across a number of installations that can be implemented and supported locally. Clients cover the entire industrial sector, which spans many industries, including chemicals and

pharmaceuticals; food, beverage and tobacco; electronics and instrumentation; and plastics and machinery.

Main/Tracker is marketed to industrial sector businesses, schools, hospitals and construction firms.

The target market for SSA's AS/SET CASE products consists of BPCS/AS target customers as well as other users with a need to develop customized software tools.

The EDI products are marketed to the BPCS/AS and AS/SET marketplaces.

INPUT estimates that approximately 71% of SSA's fiscal 1993 revenue was derived from applications software product license fees and 29% from client support services.

A three-year source of revenue summary follows:

System Software Associates, Inc. Three-Year Source of Revenue Summary (\$ Millions)

ITEM	Fiscal Year					
	10/93		10/92		10/91	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Software license fees	\$187.9	71%	\$178.5	78%	\$116.7	80%
Client services and other (a)	75.5	29%	50.3	22%	29.3	20%
Total	\$283.4	100%	\$228.8	100%	\$146.0	100%

(a) Includes hardware sales of approximately \$2.3 million in fiscal 1992 and \$1.4 million in fiscal 1991.

System Software Associates, Inc.
Software License Revenue by Product Line
 (\$ Millions)

ITEM	Fiscal Year					
	10/93		10/92		10/91	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
BPCS/AS	\$150.3	80%	\$148.2	83%	\$98.0	84%
AS/SET	28.2	15%	8.5	16%	18.7	16%
EDI/SET	5.6	3%	1.8	1%	--	--
Main/Tracker	3.8	2%	--	--	--	--
Total	\$187.9	100%	\$178.5	100%	\$116.7	100%

Geographic Markets

Approximately 31% of SSA's fiscal 1993 revenue was derived from the U.S. The remaining 69% was derived from various international sources, including \$45.8

million (17% of revenue) from sales made from the U.S. to other geographic markets.

A three-year summary of source of revenue follows:

System Software Associates, Inc.
Three-Year Geographic Source of Revenue Summary
 (\$ Millions)

ITEM	Fiscal Year					
	10/93		10/92		10/91	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$81.3	31%	\$68.2	30%	\$60.6	42%
Europe/Middle East	98.6	38%	85.8	38%	53.2	36%
Asia/Pacific	16.5	6%	17.2	7%	8.9	6%
Canada/Latin America	14.0	5%	12.4	5%	8.9	6%
Other	52.8	20%	45.2	20%	14.4	10%
Total	263.4	100%	\$228.8	100%	\$146.0	100%

SSA has well-established operations in all major international markets, including Brazil, Mexico, Argentina, Italy, France, Spain, Germany, the Netherlands, the U.K., Australia, Singapore, Japan and China.

Acquisitions

During fiscal 1993, SSA expanded its global coverage through three acquisitions costing \$5.4 million.

- In October 1993, SSA acquired the remaining interest in Solid Beheer B.V., a Dutch company that develops and supports SSA's EDI products. SSA originally entered into a joint venture with Solid Beheer in 1991.
- In September 1993, SSA acquired its Mexican affiliate and renamed the business SSA de Mexico. The acquired company was SSA's largest affiliate serving manufacturers and distributors in Latin America with software and consulting services.
- In December 1992, SSA acquired a majority interest (51%) in a new joint venture with DAT, a German affiliate and named the operation SSA-DAT GmbH. The joint venture was made to better position SSA for increased sales and support coverage among Germany's large base of manufacturers and AS/400 users as well as enhanced support to major accounts with facilities in that country.

In August 1993, SSA acquired Elke Corp. of Plymouth (MN) for 300,000 shares of SSA common stock valued at about \$6.4 million. Although the acquisition was

accounted for as a pooling of interests, SSA's financials prior to the acquisition were not restated.

- Elke is a leading provider of the Main/Tracker product line for tracking and managing the maintenance of equipment, facilities and vehicles to industrial sector businesses and organizations such as schools, hospitals and construction firms.
- Elke had approximately 50 employees at the time of the acquisition, annual revenue of about \$4 million and approximately 2,500 customers using its Main/Tracker products.
- Elke has been renamed SSA/Elke.

In July 1992, SSA acquired 80% of its Italian affiliate, CSA Sistemi Software and renamed the business SSA Italia. The acquisition was made to strengthen SSA's presence in Italy, Europe's largest AS/400 market, and to enhance support to its major accounts clients with facilities in Italy.

In February 1992, SSA acquired its Singapore-based affiliate, Comat Services Pte. Ltd. and its 70 employees. The acquisition is consistent with SSA's view of Asia as a key strategic market as more North American- and European-based companies shift manufacturing to rapidly developing industrial centers in that part of the world.

Employees

As of January 31, 1994, SSA had approximately 1,700 employees. About 500 of these work in customer support.

Key Products and Services

To date, SSA has licensed approximately 100,000 software products in more than 10,000 installations worldwide.

BPCS/AS Products:

SSA's primary software product line--known as the BPCS/AS--consists of more than 40 integrated products designed for manufacturing, distribution and financial applications for midrange computers.

- SSA introduced Version 3.0 of the BPCS/AS products in April 1992, Version 3.1 in September 1992 and Version 4.0 in April 1993.
- Historically, the software was primarily designed to run on IBM AS/400 computers. In June 1993, SSA announced an open systems strategy and targeted the second quarter of 1994 for shipment of an AS/SET-based version of BPCS/AS. Currently, SSA is moving all product lines to a configurable, object-based architecture that runs on multiple hardware platforms, including the IBM AS/400 as well as UNIX-based IBM RS/6000 and Hewlett-Packard HP 9000 business systems.

BPCS/AS Manufacturing Products Include the following:

- Master Production Scheduling (MPS) identifies future production and procurement actions that need to be taken in response to customer demand as well as day-to-day events and ties overall business planning to detail operations.
- Material Requirements Planning (MRP) identifies future production and procurement actions that are needed in response to day-to-day events and connects overall business planning to detail operations.
- Capacity Planning allows production control to identify potential bottlenecks and backlog problems so that adjustments can be made.
- JIT/Repetitive Manufacturing provides support for just-in-time and repetitive manufacturing techniques and support for make-to-schedule activities of process manufacturers.
- Manufacturing Data Management allows the definition and use of product structure and routing information for a variety of planning and costing needs.
- Advanced Process Industries contain features and functions essential to many process industry companies, including lot-level potency, batch balancing, physical versus theoretical quantities, container control and tracking, campaign planning, reverse balancing, full notes subsystems, lot tracking and traceability.
- Production Activity Control provides for on-line release of production schedules and batches and allows production reporting by item and work center as well as by batch.
- Configuration Management automates the configuration and order-entry processes that are executed relative to a

customer request for a make-to-specification product.

- Shop Floor Control provides current status of jobs, work-in-process and production activity to permit performance evaluation, detailed planning and scheduling.
- Quality Management System (QMS) implements quality assurance and quality control functions; integrated with production, procurement and inventory control.
- Laboratory Management System (LMS) supports the unique requirements of laboratory managers in process or discrete manufacturing environments.
- Planner's Assistant is a distributed database client/server application that supports planners who handle master production schedules and material requirements plans.
- CIMPath™ automates data collection and updates from the plant floor or distribution center through a variety of scanners, magnetic card readers, hand-held devices, voice input, scales and other devices.
- Multiple Facility Support allows configuration of BPCS/AS applications and transmission of operational data across a network of server computers and supports centralized and decentralized operating functions.
- Formulation Assistant is a distributed database client/server application to support chemists, laboratory managers

and process engineers in the graphical definition of product and process formulations.

BPCS/AS Distribution and Logistics

Products include the following:

- Customer Order Processing processes entry and fulfillment of customer orders; provides automatic pricing and inventory allocation to decrease order fulfillment cycle times, reduce back orders and provide information for production and accounting projections; and allows prints customer acknowledgements and shipping documents.
- Inventory Management allows users to obtain information for planning and control of finished goods, work-in-process and raw material inventory and provides summary and detail analysis on demand for accounting and production control purposes.
- Warehouse Management automates the warehouse distribution process, from receiving and putaway to picking and deployment.
- Repetitive Customer Schedules helps manufacturers and distributors automate and speed contract and EDI-based product shipments.
- Repetitive Supplier Schedules assists businesses in contract and EDI-based procurement and receipt of supplier products or ingredients.
- Distribution Resources Planning (DRP) identifies demand on distribution

centers and resulting impact on resupply facilities and presents transportation loading and scheduling information.

- Billing and Sales Analysis allows customer orders to be billed after shipment, with invoices printed and inventory, sales and accounting information maintained automatically.
- Purchasing links planning, requisitioning, receiving and inspection to inventory stocks to permit evaluation of vendors and purchasing performance and prints purchase orders and receiving documents.
- Shipment Management provides shipment and export documentation support for domestic and international clients.

BPCS/AS Sales/Marketing products include the following:

- Forecasting provides for statistical forecasts of future customer sales.
- Promotions and Deals provides advanced functions for managing marketing promotion programs.
- Sales Performance Management is a sales management tool that combines sales and order data with budget and planning information.

BPCS/AS Accounting and Financial Products include the following:

- General Ledger System provides user-defined financial reporting, allows for accumulation of financial information to support accounting functions, and allows

analysis of information for management decision-making.

- Accounts Payable provides for the control and processing of payables information.
- Accounts Receivable collects and disseminates cash flow information aimed at accelerating collection, assessing credit and reducing bad debt.
- Advanced Remittance Processing automatically applies receipts to invoices for bank lockbox processing, posts payments against invoices and reconciles payments to invoices.
- Credit and Deductions Management evaluates customer credit status to help credit and sales managers review customer credit worthiness.
- Payroll (U.S. only) provides control and processing of payroll information with tax calculations, user-defined deductions, check printing and payroll tax reports.
- Multi-Currency provides multiple currency operations for the financial, inventory, order processing, billing and sales applications.
- Currency Translation allows consolidation, reporting and analysis of multiple currency financial data.
- Fixed Assets (U.S. and Canada only) manages and controls all types of property, plant and equipment.
- Financial Analyst's Assistant is a distributed database client/server

application providing user-tailored analysis of financial performance.

- Cost Accounting provides activity-based control of purchasing, shop order, production schedule and overhead costs and full multiplant and multifacility costing.
- Budgets & Modeling accesses existing data from BPCS/AS products to create financial models and provides additional financial analysis.
- Draft Management handles bank drafts, deposits, giros and notes receivable and payable.

BPCS/AS Retrieval Products include the following:

- User/BIR provides access to the applications database and allows technical and nontechnical users to access information from up to 15 files at a time, manipulate that information and output it in the form of reports, on-line graphs, or file interfaces.
- USER/IFX is a fax and image management application that allows workstation users to process images and send and receive faxes while running any application.
- User Performance Measurement allows managers and executives to monitor business performance in areas of shipping, inventory, vendors, etc. It allows management to pinpoint problem areas before they adversely affect bottom-line results.

The entire BPCS product line is available in English, Arabic, Ideographic Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Ideographic Japanese, Korean, Polish, Portuguese, Russian, Spanish and Swedish.

Maintenance Management Products:

Main/Tracker, the world's leading preventive maintenance system, automates the planning and control of all equipment and facilities maintenance, safety inspections and warranty tracking.

- Main/Tracker runs on AS/400 computers. Its capabilities are integrated with BPCS/AS applications.
- There are currently more than 2,500 client implementations of Main/Tracker in North America, Europe, Latin America and Asia.

There are currently nine Main/Tracker modules as follows:

- Equipment Tracking establishes and maintains foundation data for all maintenance management activities.
- Component Tracking manages information about equipment components, including automatic tracking of component service life, spare components and repair/exchange histories.
- Preventive Maintenance Tracking schedules all preventive, predictive and corrective maintenance, repair and overhaul (MRO) tasks, plus safety

inspections and planned component replacements. Preventive maintenance is scheduled automatically on the basis of user-defined units of equipment use.

- MRO Parts Management maintains information unique to the spare parts inventory.
- Maintenance Cost Tracking reports monthly actual repair costs for the life of each facility or equipment unit, with breakdown by month and year.
- MRO Work Order Scheduling and Control manages the MRO work request backlog, then launches and controls MRO work orders.
- Automated Data Collection performs the data collection process for all facilities management tasks and supports the use of bar code reading devices.
- Warranty Claims Tracking keeps track of warranty, generates and tracks warranty claim documents, tracks warranty claim collections and keeps an on-line history of warranty activity.
- Maintenance Management Assistant is a workstation-based tool that supports user-defined MRO performance measurements and targets, analyzes trends in historical MRO performance and identifies problem areas for follow-up action.

SSA CASE Products:

SSA's AS/SET CASE tools are used to develop and maintain applications on the AS/400, RS/6000 and NT servers.

- SSA has enhanced AS/SET to generate platform-independent, business-critical applications for a range of business systems, including the HP 9000, IBM RS/6000 and NT servers.

- To date, SSA's CASE products have been installed at more than 1,600 installations worldwide and have grown to account for 15% (\$28 million) of SSA's total license fee revenue in fiscal 1993.

SSA currently offers the following CASE software products:

- AS/SET IWS (Intelligent Workstation) is a multitasking workstation-based application definition facility that operates either detached from or attached to the server.
- AS/SET UCI (Upper CASE Integration) controls and monitors the sharing of CASE constructs between multiple developers and platforms, acting as the librarian for CASE design objects between server and IWS local microcomputer repositories.
- AS/SET Repository is a common repository shared by all AS/SET objects.
- AS/SET ADD is an action diagram debugger for ADK-generated applications.
- AS/NET is a high-level communications tool for AS/400 network managers.
- AS/SET ADK (AS/400 Development Kernel) accelerates the process of design, generation and maintenance of

applications software for the AS/400 environment.

- AS/SET INT (Integrator) integrates AS/SET Repository and selected front-end workstation-based CASE tools, including KnowledgeWare and Bachman products.
- AS/SET REV (Redevelopment) is a reverse engineering product to simplify and accelerate the upgrade of existing RPG applications into CASE design objects.
- AS/SET PRM (Project Resource Manager) is designed to manage all types of business projects, from data processing assignments to marketing campaigns.
- AS/SET UDK (UNIX Development Kernel) regenerates applications to run within UNIX-based environments.
- AS/SET WDK (Workstation Development Kernel) generates application function in a Microsoft Windows environment.
- AS/NET (Networking Engineering Technology) is SSA's 4GL for AS/400 networks. It assists the network manager by replacing detailed communications coding with high-level commands and procedures.
- AS/SET GDT is a graphical design tool to build GUI displays for AS/400, RS/6000 and HP 9000 server applications.

- AS/Vision is a user tool for accessing and analyzing data in the form of queries, reports and/or graphs.
- AS/MODEL helps develop applications by defining them first at the business model level.

EDI Products:

SSA's EDI/SET products enable computer to computer exchange of business transactions between vendors and suppliers.

- EDI/SET SCK (Standards Compliance Kernel) is an EDI translation and communication product. It supports the translation of EDI messages according to national and international standards and customization for proprietary message requirements. Standards supported include ANSI X12, EDIFACT, UCS, CISCO, Odette and Tradacoms.
- EDI/SET ANK (Advanced Networking Kernel) provides the link between EDI/SET SCK translator and external value-added networks and supports communication setup, connection-type maintenance, network administration and system report retrieval functions.
- EDI/SET WDK (Workstation Development Kernel) provides EDI/SET SCK-to-workstation integration and support. It allows users to examine, edit, reformat and maintain files containing EDI messages in a packed or unpacked format and text data.
- EDI/SET IDK (Integration Development Kernel) is a high-level development tool

to provide integration of EDI messages with business enterprise systems.

- EDIPath allows information from BPCS/AS distribution, manufacturing and financial applications to be exchanged with trading partners.

Client Services:

SSA supports its clients through a worldwide client service network that consists of more than 500 direct support staff located at SSA's regional headquarters and branch operations as well as more than 3,000 additional professionals, dedicated to supporting SSA clients, in SSA's Affiliate Business Partner network.

HelpLine, SSA's international 24-hour telephone support service, also supports subscribing SSA clients.

SSA also offers the following implementation programs:

- BPCS/AS Advanced Systems Implementation Strategy (BASIS) is SSA's proprietary fast-track implementation methodology for information systems.
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Late in 1992, SSA began a joint venture with the SSA German affiliate, DAT Informationssysteme.

In late 1992, SSA introduced a project management application, AS/SET Project Resource Manager (PRM), which was jointly developed with CyberPro International, Inc. The product is designed to assist with project scheduling and budgeting.

Alliance Partner products (software products either developed by, or in conjunction with, third parties) are used by SSA to provide clients with a complete

selection of product functionality to meet their enterprise solution needs.

Competitors

SSA's primary competitors for its BPCS/AS product line include IBM/Marcam (MAPICS), American Software, Andersen Consulting, ASK Computer Systems, Computer Associates, SAP and J.D. Edwards.

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Challenges for SSA include increasing its share of the UNIX open systems market in addition to its traditional AS/400 market, dealing with pricing pressures in the open systems environment and expanding its client/service product offerings.

**SYSTEM SOFTWARE ASSOCIATES,
INC.**

500 West Madison Street
32nd Floor
Chicago, IL 60661
Phone: (312) 641-2900
Fax: (312) 641-3737

Chairman, President,
and CEO:

Status:
Total Employees:
Total Revenue:
Fiscal Year End:

Larry J. Ford
Public
1,400
\$228,800,000
10/31/92

Key Points

- In recognition of the importance of alliance partners, System Software Associates, Inc. (SSA) has expanded its relationships with SSA Alliance Partners which develop products complementary to SSA's.
- To support its worldwide customer base, SSA has expanded its network of branch offices and affiliates, which now exceed 160 locations.
- In 1992, SSA increased its presence in key markets by creating country operations and more closely aligning with its affiliates.
- Late in 1992, SSA began a joint venture with the SSA German affiliate, DAT Informationssysteme.
- In late 1992, SSA introduced a project management application, AS/SET Project Resource Manager (PRM), which was jointly developed with CyberPro International, Inc. The product is designed to assist with project scheduling and budgeting.
- In February 1993, SSA announced that it had been named an IBM Business Partner -- Cooperative Software Supplier. Under the terms of the agreement, IBM's U.S. direct sales force will market and sell SSA's complete line of software products that run on the IBM AS/400 computer.

**Company
Description**

System Software Associates, Inc. (SSA), founded in 1981, develops, markets, and supports the following software products:

- BPCS (Business and Planning Control System) is an integrated line of business software for manufacturing, financial and distribution management applications designed to run on IBM's AS/400 and System/3X midrange computers.
- Since fiscal 1990, SSA has introduced more than ten computer-aided software engineering (CASE) software products, including AS/SET™, a tool designed exclusively for software applications design, development, and maintenance on the IBM AS/400.
- During 1991, SSA introduced an electronic data interchange (EDI) product line for IBM AS/400 environments.

Company Strategy

SSA's product strategy incorporates a cooperative processing architecture, compliance with IBM's SAA, graphic user interface capabilities, client/server technologies, and seamless integration to other technologies.

SSA's strategy is to increase its worldwide market presence by gaining an SSA country operation in strategic markets, and then to seek additional business partners with increased emphasis on joint ventures.

**Operations/
Structure**

SSA's products are currently marketed worldwide through SSA's major accounts division, SSA branch offices, and an Affiliate Business Partner Network of independent companies worldwide.

During fiscal 1992, SSA expanded its Affiliate Network to 150 firms located in more than 60 countries, from approximately 120 firms in about 50 countries in 1991.

SSA's North American direct sales offices are in Chicago, Atlanta, Boston, and Milwaukee. SSA has a local presence in more than three dozen other North American cities through its BPCS and AS/SET affiliates.

Headquartered in the U.K., SSA Europe also has branch operations in France, Germany, Italy, Spain, and the Netherlands with additional SSA staff located in Sweden. SSA Europe also has 40 affiliates, comprised mostly of IBM agents.

SSA Pacific has direct sales offices in Sydney, Melbourne, and New Zealand and seven affiliates in other parts of Australia, Papua New Guinea, and Fiji.

Headquartered in Singapore, SSA Asia also has 28 affiliates in Malaysia, Thailand, Indonesia, Sri Lanka, Hong Kong, Taiwan, Korea, China, and the Philippines.

SSA Latin America is headquartered in Buenos Aires and has a satellite office in San Juan, Puerto Rico.

Financials

Fiscal 1992 revenue reached \$228.8 million, a 57% increase over fiscal 1991 revenue of \$146 million. In 1992, net income was \$26.6 million, compared to \$15.4 million in fiscal 1991. A three-year financial summary follows:

**SYSTEM SOFTWARE ASSOCIATES, INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

Item	FISCAL YEAR		
	10/92	10/91	10/90
Revenue	\$228.8	\$146.0	\$108.5
• Percent increase from previous year	57%	34.6%	31%
Income before taxes	\$41.6	\$23.8	\$13.7
• Percent increase from previous year	74.8%	73.7%	43%
Net income	\$26.6	\$15.4	\$8.8
• Percent increase from previous year	72.7%	75.0%	47%
Earnings per share(a)	\$0.99	\$0.58	\$0.33

(a) Per share data reflects December 1992 stock split

(b) Financial information for 1991 and prior was restated to reflect the adoption of Statement of Position 91-1

SSA management attributes revenue growth during fiscal 1991 and 1992 to the following:

- An increase in sales from existing affiliates and continued expansion of the company's global affiliate network

- Higher sales by SSA's major account units
- Expansion of SSA's client services groups
- Continued growth of SSA's On-going Support, which includes a telephone support service for SSA's software clients

The rate of revenue growth from fiscal 1990 to 1991 declined primarily as a result of weakened economies in SSA's major markets and diminished foreign revenues due to a strengthening of the U.S. dollar. Also, revenue growth was reduced by the planned reduction in hardware reseller sales associated with SSA's withdrawal from the IBM U.S. Industry Remarketer program.

Acquisitions

Recent SSA acquisitions include the following:

- In 1992, SSA acquired a majority holding in their Italian affiliate, CSA Sistemi Software.
- In early 1992, SSA acquired its Singapore-based joint venture, Comat Services Pte. and its 70 employees consolidating its position in Singapore, a growing market for Asian manufacturing. It now operates as SSA Singapore.
- In September 1991, SSA acquired a 51% controlling interest in a joint venture with SSA Iverica S.A., which serves as SSA's Spanish affiliate.

Alliances

In March 1993, SSA announced that it formed a marketing and development alliance with Bachman Information Systems, Inc. to provide IBM AS/400 customers with an analysis tool for integrating computer-aided software engineering (CASE).

In February 1993, SSA announced that it had been named an IBM Business Partner -- Cooperative Software Supplier. Under the terms of the agreement, IBM's U.S. direct sales force will market and sell SSA's complete line of software products that run on the IBM AS/400 computer.

In April 1991, SSA entered into a joint venture with the shareholders of a Dutch company, Solid Beheer B.V.

Employees

As of April 30, 1993, SSA has approximately 1,400 employees. Over 600 of these work in customer support.

Competitors

SSA's primary competitors for its BPCS product line include IBM (MAPICS), American Software, Andersen Consulting, ASK Computer Systems, and Marcam. CASE competitors include Synon.

Key Products and Services

INPUT estimates that approximately 79% of SSA's fiscal 1992 revenue was derived from applications software products, 20% from client support services, and less than 1% from hardware sales.

A three-year source of revenue summary follows:

**SYSTEM SOFTWARE ASSOCIATES, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	10/92		10/91		10/90	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software products	\$175.5	77%	\$115.4	79%	\$79.9	74%
Client support	\$51.0	22%	29.2	20%	24.3	22.5%
Hardware	\$2.3	1%	1.4	1%	4.3	3.5%
TOTAL	\$228.8	100%	\$146	100%	\$108.5	100%

SSA has licensed approximately 60,000 software products to over 6,800 companies worldwide.

Key Products

SSA's primary software product line--known as the Business Planning and Control System (BPCS)--consists of 40 integrated products designed for manufacturing, distribution, and financial applications for IBM AS/400, System/38, System/36 computers and intelligent workstations

SSA's current BPCS products include the following:

- Manufacturing Products
 - Master Production Scheduling identifies production planning actions that need to be taken in response to day-to-day events and ties overall business planning to detail operations.
 - Material Requirements Planning (MRP) identifies purchasing and production scheduling actions that are needed in response to day-to-day events.
 - JIT/Repetitive Manufacturing provides support for just-in-time manufacturing techniques and support for repetitive process manufacturers (not available for the System/36).
 - Manufacturing Data Management allows the retrieval and use of product structure and routing information for planning and costing needs.
 - Shop Floor Control provides current status of jobs, work-in-process, and production activity to permit detailed planning and scheduling.
 - Capacity Planning identifies potential capacity bottlenecks and backlog problems so that adjustments can be made.
 - Cost Accounting controls purchasing, jobs, and manufacturing cost information.
 - User Performance Measurement provides feedback and accountability in several key management areas to allow executives to monitor and compare the performance of their business against plan (not available for the System/36).
 - CIMPath™ automates data collection and updates from the plant floor or distribution center via scanners, magnetic card readers, hand-held devices, voice input, scales, and other devices (not available for the System/36).
 - Advanced Process Industries supports process industry companies in application areas such as lot level potency, batch balancing, physical versus theoretical quantities, full notes subsystems, lot tracking, and traceability.
 - Multiple Facility Support, introduced during 1990, allows configuration of BPCS applications and transmission of operation data across a network of AS/400s and supports centralized and decentralized operating functions.

- Distribution and Logistics Products
 - Inventory Management allows processing of information on finished goods, work-in-process, and raw material inventory and provides summary and detail analysis on demand for both accounting and production control purposes.
 - Distribution Resources Planning (DRP) identifies the demand on distribution centers and the resulting impact on resupply facilities and presents transportation loading and scheduling information (not available for the System/36).
 - Order Processing processes entry and disposition of customer orders; provides automatic pricing, inventory allocation, and information for production and accounting projections; and allows printing of customer acknowledgements and shipping documents.
 - Billing and Sales Analysis allows customer orders to be billed after shipment. Invoices are printed and inventory, sales, and accounting information is maintained automatically.
 - Purchasing links planning, requisitioning, receiving, and inspection to inventory stocks to permit evaluation of vendors and purchasing performance, and prints purchase orders and receiving documents.
 - Forecasting provides for statistical forecasts of future customer sales.
 - Promotions and Deals provides management of marketing promotion programs (AS/400 only).
- Financial Products
 - General Ledger and Financial Retrieval System provides for accumulation of financial information to support accounting functions, allows analysis of information for management decision making, and allows for user-defined financial reporting.
 - Accounts Payable provides for the control and processing of payables information.
 - Accounts Receivable collects and disseminates cash flow information aimed at accelerating collection, assessing credit, and reducing bad debt.

- Multiple Currency provides multiple currency operations for the financial, inventory, order processing, billing, and sales applications.
- Currency Translation allows consolidation, reporting, and analysis of multiple currency financial data.
- Payroll (U.S. only) provides control and processing of payroll information with tax calculations, supporting all 50 states. The system allows user-defined deductions, prints checks, and produces tax reports.
- Draft Management handles bank drafts, deposits, and notes receivable and payable; and ties together the ledger, sub-ledger, ordering and planning capabilities of BPCS to improve cash use, control, and planning.
- Fixed Assets (U.S. and Canada only) manages and controls all types of property, plant, and equipment (AS/400 only).
- Decision Support Products
 - User/BPCS Information Retrieval provides access to the applications data base, and allows technical and non-technical end users to access information from up to 15 files at once, manipulate that information, and output it in the form of reports, on-line graphs, or file interfaces.
 - Electronic Mail allows users to create, send, receive, file, and print communications electronically (not available on the System/36).

During fiscal 1991, SSA licensed over 780 CASE products worldwide, generating revenues in excess of \$17 million. SSA currently offers the following CASE software products for IBM AS/400 environments:

- AS/SET ADK (Application System/Software Engineering Technology) accelerates the process of design, generation, and maintenance of applications software for the AS/400 environment. The product ranges in price from \$35,000 to \$85,000, depending on the number of users and the AS/400 model used.
- AS/SET Integrator™ provides integration between AS/SET and selected front-end workstation-based CASE tools.
- AS/NET™ is a networking product that permits transmission of any type of information among multiple CPUs in an AS/400 network.

- AS/SET IWS is a multitasking workstation-based CASE product that operates either detached from, attached to, or semi-attached to the AS/400.
- AS/SET UCI controls and monitors the sharing of CASE constructs between multiple developers and platforms.
- AS/SET REV has reverse engineering capabilities.
- AS/SET PRM is designed to manage all types of business projects, from data processing assignments to marketing campaigns.
- AS/SET WDK-U was introduced in late 1992. AS/SET WDK-U is a CASE tool that quickly regenerates AS/400 applications to work on UNIX workstations.

SSA's EDI products are available for AS/400 environments and include the following:

- SSA EDI-SOL supports the translation and communication of EDI messages according to national and international standards, and customization for proprietary message requirements. Version 2.0 was released in 1992, and incorporates the following new features:
 - Enhanced scheduler
 - Manual message entry
 - 200% faster processing
- SSA EDI-NET provides the link between the EDI-SOL AS/400 translator and external value-added networks. It supports communication set-up, connection type maintenance, network administration, and system report retrieval functions.
- SSA EDI-TLK provides seamless AS/400 EDI-SOL-to-workstation integration and support for other workstation communication and translation applications. The product allows users to examine, edit, reformat, and maintain files containing EDI messages in packed or unpacked format, and text data.
- BPCS EDIPath integrates the BPCS product line with the EDI-SOL translator and enables EDI messaging within the normal course of BPCS transaction processing.
- SSA EDI-SET allows users to develop inbound and outbound message interfaces through "intelligent" file and field mapping to any AS/400 application database. EDI-SET is an EDI integration product for developing special interfaces for trading partners between an application database and EDI messages.

On January 15, 1992, SSA had 125 affiliate business partners with offices in 53 countries. Of these, 62 affiliates sell BPCS and CASE products, 23 sell PBCS only, and 40 sell CASE products only.

- Affiliates are responsible in their respective territories for marketing, sales, and implementation services, including education, project management, and customization.
- SSA provides technical, applications, and sales training; marketing and technical support; and emergency customer service to its affiliates. SSA also takes primary sales responsibility for large accounts.

Industry Markets

SSA's revenue is derived primarily from the discrete manufacturing, process manufacturing, and distribution industries.

SSA sells and supports its products through its affiliate network, a major accounts organization, and branch offices.

The target markets for the BPCS product line include manufacturers with annual revenues ranging from \$10 million to multi-billion dollar businesses, distributors with annual revenue ranging from \$15 million to \$500 million, and companies with annual revenues greater than \$500,000. The larger companies are often looking for common systems across a number of installations that can be implemented and supported locally. Currently, a significant and increasing portion of sales are to larger companies.

The target market for SSA's CASE products consists of BPCS target customers as well as other AS/400 users with a need to develop customized software tools.

Geographic Markets

Approximately 41% of SSA's fiscal 1992 revenue was derived from the U.S. The remaining 59% was derived from various international sources.

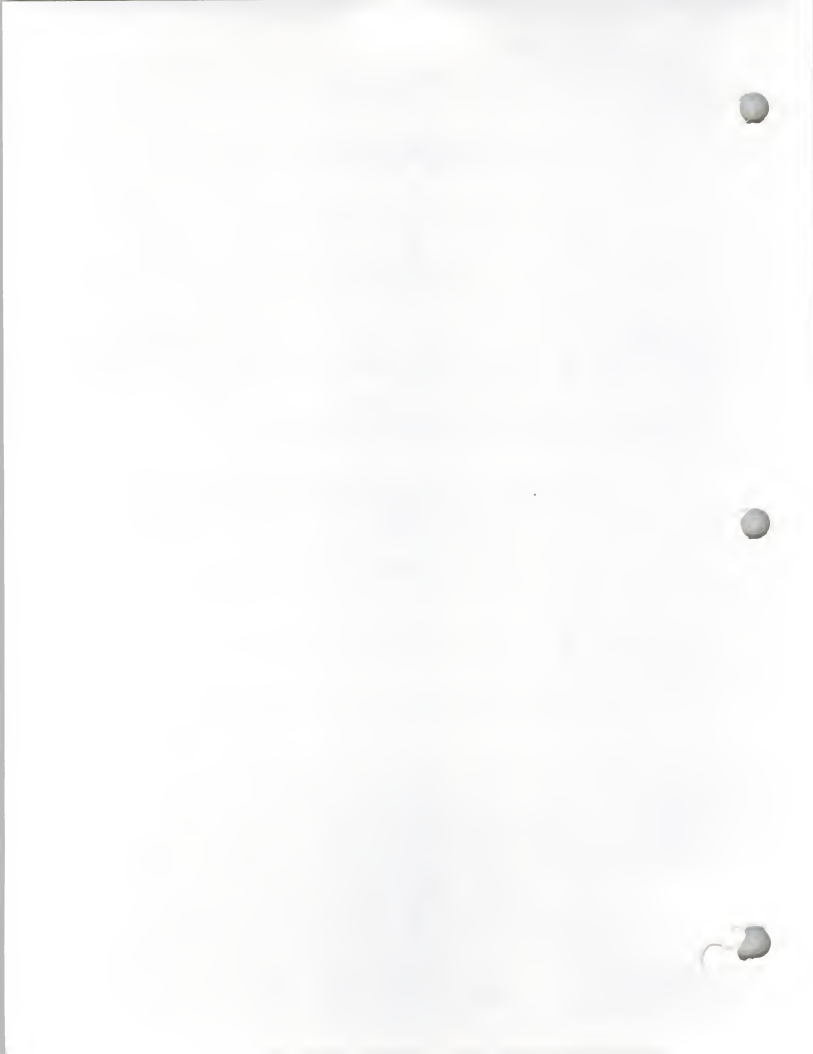
A three-year summary of source of revenue follows:

**SYSTEMS SOFTWARE ASSOCIATES, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	10/92		10/91		10/89	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$110.4	48%	\$89.3	61%	\$64.6	60%
Europe/Middle East	\$73.2	32%	\$42.3	29%	\$34.5	32%
Other (a)	\$45.2	20%	\$14.4	10%	\$9.4	8%
TOTAL	\$228.8	100%	\$146.0	100%	\$108.5	100%

(a) Includes sales from Asia/Pacific, Canada, and Latin America.

The entire BPCS product line is available in English, and a substantial portion of the line is available in Dutch, French, German, Ideographic Chinese, Simplified Chinese, Japanese, Italian, Korean, Spanish, Portuguese, Swedish, and Finnish.



COMPANY PROFILE

SYSTEM SOFTWARE ASSOCIATES, INC.

500 West Madison Street
32nd Floor
Chicago, IL 60661
Phone: (312) 641-2900
Fax: (312) 641-3737

Larry J. Ford, Chairman, President,
and CEO

Public Corporation, NASDAQ
Total Employees: 781 (1/92)
Total Revenue, Fiscal Year End
10/31/91: \$149,080,000

The Company

System Software Associates, Inc. (SSA), founded in 1981, develops, markets, and supports the following software products:

- BPCS (Business and Planning Control System) is an integrated line of business software for manufacturing, financial and distribution management applications designed to run on IBM's AS/400 and System/3X midrange computers.
- During fiscal 1990, SSA introduced three computer-aided software engineering (CASE) software products, including AS/SET™, a CASE tool designed exclusively for software applications design, development, and maintenance on the IBM AS/400.
- During 1991, SSA introduced an electronic data interchange (EDI) product line for IBM AS/400 environments.

SSA's product strategy incorporates a cooperative processing architecture, compliance with IBM's SAA, graphic user interface capabilities, and seamless integration to other technologies.

SSA's products are currently marketed worldwide through SSA's major accounts division, SSA branch offices, and an Affiliate Business Partner Network of independent companies worldwide. During fiscal 1991, SSA expanded its Affiliate Network to 120 firms located in 53 countries, from a total of 113 firms in 45 countries one year earlier.

Fiscal 1991 revenue reached \$149.1 million, a 20% increase over fiscal 1990 revenue of \$124.2 million. Net income was \$16.7 million, compared to \$16.4 million in fiscal 1990. A five-year financial summary follows:

**SYSTEM SOFTWARE ASSOCIATES, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR					
	10/91	10/90	10/89	10/88	10/87	CAGR
Revenue	\$149.1	\$124.2	\$95.0	\$61.5	\$30.9	48%
• Percent increase from previous year	20%	31%	54%	99%	92%	
Income before taxes	\$25.9	\$25.6	\$18.0	\$9.8	\$6.0	44%
• Percent increase from previous year	1%	43%	84%	64%	83%	
• Gross margin	17%	21%	19%	16%	19%	
Net income	\$16.7	\$16.4	\$11.1	\$6.2	\$3.3	50%
• Percent increase from previous year	2%	47%	78%	89%	88%	
• Net margin	11%	13%	12%	10%	11%	
Earnings per share (a)	\$0.95	\$0.92	\$0.63	\$0.35	\$0.20	48%
• Percent increase from previous year	3%	46%	80%	75%	N/A	

(a) Restated to reflect a 3-for-2 common stock split, effected as a stock dividend, effective December 23, 1991.

SSA management attributes revenue growth during fiscal 1990 and 1991 to the following:

- An increase in sales by existing affiliates and continued expansion of the company's global affiliate network
- Higher sales by SSA's major account units
- Expansion of SSA's client services groups
- The introduction of new BPCS and AS/SET products
- Continued growth of SSA's HelpLine, a telephone support service for SSA's software clients

The rate of revenue growth from fiscal 1990 to 1991 declined primarily as a result of weakened economies in SSA's major markets and diminished foreign revenues due to a strengthening of the U.S. dollar. Also, revenue growth was reduced by the planned reduction in hardware reseller sales associated with SSA's withdrawal from the IBM U.S. Industry Remarketer program. Revenue from this

program declined from \$11.4 million in fiscal 1989, to \$3.6 million in fiscal 1990, to zero in fiscal 1991.

Research and development expenditures, including capitalized software development costs, were approximately \$15.1 million (10% of revenue) in fiscal 1991, \$12.1 million (10% of revenue) in fiscal 1990, and \$9.0 million (9% of revenue) in fiscal 1989.

Revenue for the three months ending January 31, 1992 reached \$51.8 million, a 45% increase over \$35.9 million for the same period in 1991. Net income reached \$7.7 million, compared to \$6.6 million for the same period a year ago. During the quarter, SSA implemented a change in the method of accounting for software revenue.

Recent SSA acquisitions/joint ventures include the following:

- In early 1992, SSA acquired its Singapore-based joint venture, Comat Services Pte. and its 70 employees. It now operates as SSA Singapore.
- In September 1991, SSA acquired a 51% controlling interest in a joint venture with SSA Iverica S.A., which serves as SSA's Spanish affiliate.
- In April 1991, SSA entered into a joint venture with the shareholders of a Dutch company, Solid Beheer B.V.
- In July 1990, SSA purchased a 50% interest in a newly formed joint venture, SSA Mid Atlantic, Inc., with its New Jersey-based affiliate, Software Plus, Inc., for \$2.5 million in cash.

SSA's primary competitors for its BPCS product line include IBM (MAPICS), American Software, Andersen Consulting, ASK Computer Systems, and Marcam. CASE competitors include Synon.

Key Products and Services

INPUT estimates that approximately 79% of SSA's fiscal 1991 revenue was derived from applications software products, 20% from client support services, and less than 1% from hardware sales.

A three-year source of revenue summary follows:

**SYSTEM SOFTWARE ASSOCIATES, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	10/91		10/90		10/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software products	\$117.3	79%	\$93.6	75%	\$65.8	69%
Client support	30.3	20%	25.5	21%	\$15.7	17%
Hardware	1.5	1%	5.1	4%	13.5	14%
TOTAL	\$149.1	100%	\$124.2	100%	\$95.0	100%

SSA has licensed approximately 51,000 software products to over 5,000 companies worldwide.

SSA's primary software product line--known as the Business Planning and Control System (BPCS)--consists of 29 integrated products designed for manufacturing, distribution, and financial applications for IBM AS/400, System/38, and System/36 computers.

SSA's current BPCS products include the following:

- Manufacturing Products
 - Master Production Scheduling identifies production planning actions that need to be taken in response to day-to-day events and ties overall business planning to detail operations.
 - Material Requirements Planning (MRP) identifies purchasing and production scheduling actions that are needed in response to day-to-day events.
 - JIT/Repetitive Manufacturing provides support for just-in-time manufacturing techniques and support for repetitive process manufacturers (not available for the System/36).
 - Manufacturing Data Management allows the retrieval and use of product structure and routing information for planning and costing needs.

- Shop Floor Control provides current status of jobs, work-in-process, and production activity to permit detailed planning and scheduling.
- Capacity Planning identifies potential capacity bottlenecks and backlog problems so that adjustments can be made.
- Cost Accounting controls purchasing, jobs, and manufacturing cost information.
- Performance Measurement provides feedback and accountability in several key management areas to allow executives to monitor and compare the performance of their business against plan (not available for the System/36).
- CIMPath™ automates data collection and updates from the plant floor or distribution center via scanners, magnetic card readers, hand-held devices, voice input, scales, and other devices (not available for the System/36).
- Advanced Process supports process industry companies in application areas such as lot level potency, batch balancing, physical versus theoretical quantities, full notes subsystems, lot tracking, and traceability.
- Multi-Facility Support, introduced during 1990, allows configuration of BPCS applications and transmission of operation data across a network of AS/400s and supports centralized and decentralized operating functions.
- Distribution and Logistics Products
 - Inventory Management allows processing of information on finished goods, work-in-process, and raw material inventory and provides summary and detail analysis on demand for both accounting and production control purposes.
 - Distribution Resources Planning (DRP) identifies demand on distribution centers and resulting impact on resupply facilities and presents transportation loading and scheduling information (not available for the System/36).
 - Order Processing processes entry and disposition of customer orders; provides automatic pricing, inventory allocation, and information for production and accounting projections; and allows printing of customer acknowledgements and shipping documents.

- Billing and Sales Analysis allows customer orders to be billed after shipment. Invoices are printed and inventory, sales, and accounting information is maintained automatically.
- Purchasing links planning, requisitioning, receiving, and inspection to inventory stocks to permit evaluation of vendors and purchasing performance, and prints purchase orders and receiving documents.
- Forecasting provides for statistical forecasts of future customer sales.
- Promotions and Deals provides management of marketing promotion programs (AS/400 only).

Financial Products

- General Ledger and Financial Retrieval System provides for accumulation of financial information to support accounting functions, allows analysis of information for management decision making, and allows for user-defined financial reporting.
- Accounts Payable provides for the control and processing of payables information.
- Accounts Receivable collects and disseminates cash flow information aimed at accelerating collection, assessing credit, and reducing bad debt.
- Multi-Currency provides multiple currency operations for the financial, inventory, order processing, billing, and sales applications.
- Currency Translation allows consolidation, reporting, and analysis of multiple currency financial data.
- Payroll (U.S. only) provides control and processing of payroll information with tax calculations, supporting all 50 states. The system allows user-defined deductions, prints checks, and produces tax reports.
- Cash Management handles bank drafts, deposits, and notes receivable and payable; and ties together the ledger, sub-ledger, ordering and planning capabilities of BPCS to improve cash use, control, and planning.

- Fixed Assets (U.S. and Canada only) manages and controls all types of property, plant, and equipment (AS/400 only).
- Decision Support Products
 - Information Retrieval provides access to the applications data base, and allows technical and non-technical end users to access information from up to 15 files at once, manipulate that information, and output it in the form of reports, on-line graphs, or file interfaces.
 - Business Modeling provides full-function spreadsheet capabilities as well as a direct data base interface to any existing application.
 - Electronic Mail allows users to create, send, receive, file, and print communications electronically (not available on the System/36).

During fiscal 1991, SSA licensed over 780 CASE products worldwide, generating revenues in excess of \$17 million. SSA currently offers the following CASE software products for IBM AS/400 environments:

- AS/SET ADK (Application System/Software Engineering Technology) accelerates the process of design, generation, and maintenance of applications software for the AS/400 environment. The product ranges in price from \$35,000 to \$85,000, depending on the number of users and the AS/400 model used.
- AS/SET Integrator™ provides integration between AS/SET and selected front-end workstation-based CASE tools.
- AS/NET™ is a networking product that permits transmission of any type of information among multiple CPUs in an AS/400 network.
- AS/SET IWS is a multitasking workstation-based CASE product that operates either detached from, attached to, or semi-attached to the AS/400.
- AS/SET UCI controls and monitors the sharing of CASE constructs between multiple developers and platforms.
- AS/SET REV has reverse engineering capabilities.

SSA's EDI products are available for AS/400 environments and include the following:

- SSA EDI-SOL supports the translation and communication of EDI messages according to national and international standards, and customization for proprietary message requirements.
- SSA EDI-NET provides the link between the EDI-SOL AS/400 translator and external value-added networks. It supports communication set-up, connection type maintenance, network administration, and system report retrieval functions.
- SSA EDI-TLK provides seamless AS/400 EDI-SOL-to-workstation integration and support for other workstation communication and translation applications. The product allows users to examine, edit, reformat, and maintain files containing EDI messages in packed or unpacked format, and text data.
- BPCS EDIPath integrates the BPCS product line with the EDI-SOL translator and enables EDI messaging within the normal course of BPCS transaction processing.

On January 15, 1992, SSA had 125 affiliate business partners with offices in 53 countries. Of these, 62 affiliates sell BPCS and CASE products, 23 sell BPCS only, and 40 sell CASE products only.

- Affiliates are responsible in their respective territories for marketing and sales and implementation services, including education, project management, and customization.
- SSA provides technical, applications, and sales training; marketing and technical support; and emergency customer service to its affiliates. SSA also takes primary sales responsibility for large accounts.

Industry Markets

SSA's revenue is derived primarily from the discrete manufacturing, process manufacturing, and distribution industries.

SSA sells and supports its products through its affiliate network, a major accounts organization, and branch offices.

The target markets for the BPCS product line include manufacturers with annual revenues ranging from \$10 million to \$500 million, distributors with annual revenue ranging from \$15 million to \$500 million, and companies with annual revenues greater than \$500,000. The larger companies are often looking for

common systems across a number of installations that can be implemented and supported locally.

Currently, a significant and increasing portion of sales are to larger companies. To date, SSA has made sales to divisions or subsidiaries of over 300 of the combined Fortune 500 and Fortune International companies.

The target market for SSA's CASE products consists of BPCS target customers as well as other AS/400 users with a need to develop customized software tools.

Geographic Markets

Approximately 41% of SSA's fiscal 1991 revenue was derived from the U.S. The remaining 59% was derived from various international sources.

A three-year summary of source of revenue follows:

**SYSTEMS SOFTWARE ASSOCIATES, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	10/91		10/90		10/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$62.0	42%	\$53.4	43%	\$53.7	56%
Europe/Middle East	54.2	36%	48.0	39%	23.4	25%
Other (a)	32.9	22%	22.8	18%	17.9	19%
TOTAL	\$149.1	100%	\$124.2	100%	\$95.0	100%

(a) Includes sales from Asia/Pacific, Canada, and Latin America.

The entire BPCS product line is available in English, and a substantial portion of the line is available in Dutch, French, German, Ideographic Chinese, Ideographic Japanese, Italian, Korean, Spanish, Portuguese, Swedish, and Finnish.

In North America, SSA has over 2,800 companies using BPCS, and 400 using AS/SET. SSA's North American direct sales offices are in Chicago, Atlanta, Boston, Louisville, and Milwaukee. SSA has a local presence in more than three dozen other North American cities through its BPCS and AS/SET affiliates.

SSA Europe has over 1,000 BPCS clients spread across 15 European countries and over 300 AS/SET clients. Headquartered in the U.K., SSA Europe also has branch operations in the Netherlands and Spain, and additional SSA staff located in France, Germany, and Sweden. SSA Europe also has 40 affiliates, mostly also IBM agents.

SSA Pacific has installed BPCS at over 700 sites in Australia and New Zealand and has 20 AS/SET clients. SSA Pacific has direct sales offices in Sydney, Melbourne, and New Zealand and seven affiliates in other parts of Australia, Papua New Guinea, and Fiji.

- In October 1990, SSA's Australian subsidiary, SSA Services Pty, sold a 15% equity interest to IBM Australia Limited for approximately \$1 million.

SSA Asia has over 500 BPCS and 150 AS/SET clients. Headquartered in Singapore, SSA Asia also has 28 affiliates in Malaysia, Thailand, Indonesia, Sri Lanka, Hong Kong, Taiwan, Korea, China, and the Philippines.

SSA Japan has over 50 BPCS clients and several AS/SET clients.

SSA Latin America has 250 BPCS clients and 30 AS/SET clients. The unit is headquartered in Buenos Aires and has a satellite office in San Juan.

COMPANY PROFILE

SYSTEM SOFTWARE ASSOCIATES, INC.

500 West Madison
32nd Floor
Chicago, IL 60606
(312) 641-2900

Roger E. Covey, Chairman and President
Public Corporation, NASDAQ
Total Employees: 591
Total Revenue, Fiscal Year End
10/31/90: \$124,153,000

The Company

System Software Associates, Inc. (SSA), founded in 1981, develops, markets, and supports the following software products:

- BPCS (Business and Planning Control System) is an integrated line of business software for manufacturing, financial and distribution management applications designed to run on IBM's AS/400 and System/3X midrange computers.
- During fiscal 1990, SSA introduced three computer-aided software engineering (CASE) software products, including AS/SET™, a CASE tool designed exclusively for software applications design, development, and maintenance on the IBM AS/400.

SSA's product strategy incorporates a cooperative processing architecture, compliance with IBM's SAA, graphic user interface capabilities, and seamless integration to other technologies.

SSA's products are currently marketed worldwide through SSA's major accounts division, SSA branch offices, and an Affiliate Business Partner Network of independent companies worldwide. During fiscal 1990, SSA rapidly expanded its Affiliate Network to 113 firms located in 45 countries, from a total of 58 firms in 30 countries one year earlier.

Fiscal 1990 revenue reached \$124.2 million, a 31% increase over fiscal 1989 revenue of \$95.0 million. Net income rose 47%, from \$11.1 million in fiscal 1989 to \$16.4 million in fiscal 1990. A five-year financial summary follows:

SYSTEM SOFTWARE ASSOCIATES, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)

ITEM	FISCAL YEAR					
	10/90	10/89	10/88	10/87	10/86	CAGR
Revenue	\$124.2	\$95.0	\$61.5	\$30.9	\$16.1	50%
• Percent increase from previous year	31%	54%	99%	92%	70%	
Income before taxes	\$25.6	\$18.0	\$9.8	\$6.0	\$3.3	51%
• Percent increase from previous year	43%	84%	64%	83%	67%	
• Gross margin	21%	19%	16%	19%	20%	
Net income	\$16.4	\$11.1	\$6.2	\$3.3	\$1.8	56%
• Percent increase from previous year	47%	78%	89%	88%	67%	
• Net margin	13%	12%	10%	11%	11%	
Earnings per share (a)	\$1.38	\$0.94	\$0.53	\$0.30	\$0.19	49%
• Percent increase from previous year	47%	77%	77%	58%	46%	

(a) Restated to reflect a 3-for-2 common stock split, effected as a stock dividend, effective January 12, 1990.

SSA management attributes revenue growth during fiscal 1989 and 1990 to the following:

- An increase in sales by existing affiliates and continued expansion of the company's global affiliate network
- Higher sales by SSA's major account units
- Expansion of the client services groups in SSA's European and Pacific Regional headquarters
- The introduction of new BPCS products
- Continued growth of SSA's HelpLine, a telephone support service for SSA's software clients
- The successful introduction of three CASE products during fiscal 1990

Revenue growth during fiscal 1990 was offset by the planned reduction in hardware reseller sales associated with SSA's withdrawal from the IBM U.S. Industry Remarketer program. Revenue from this program declined by \$7.8 million, from \$11.4 million in fiscal 1989 to \$3.6 million in fiscal 1990.

Research and development expenditures, including capitalized software development costs, were approximately \$12.1 million (10% of revenue) in fiscal 1990, \$9.0 million (9% of revenue) in fiscal 1989, and \$5.9 million (10% of revenue) in fiscal 1988.

In July 1990, SSA purchased a 50% interest in a newly formed joint venture, SSA Mid Atlantic, Inc., with its New Jersey-based affiliate, Software Plus, Inc., for \$2.5 million in cash.

In October 1990, SSA announced that IBM Australia Limited had committed to acquire a 15% interest in SSA's Australian subsidiary, SSA Services Pty., Ltd.

SSA's primary competitors for its BPCS product line include IBM (MAPICS), American Software, Andersen Consulting, ASK Computer Systems, Marcam, and Pansophic Systems. CASE competitors include Synon.

Key Products and Services

INPUT estimates approximately 78% of SSA's fiscal 1990 revenue was derived from applications software products, 20% from client support services, and 2% from hardware sales.

A three-year source of revenue summary follows:

SYSTEM SOFTWARE ASSOCIATES, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)

	FISCAL YEAR					
	10/90		10/89		10/88	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software products	\$93.6	75%	\$65.8	69%	\$44.9	73%
Client support	25.5	21%	\$15.7	17%	10.2	17%
Hardware	5.1	4%	13.5	14%	6.4	10%
TOTAL	\$124.2	100%	\$95.0	100%	\$61.5	100%

SSA's primary software product line--known as the Business Planning and Control System (BPCS)--consists of 27 integrated products designed for manufacturing, distribution, and financial applications for IBM AS/400, System/38, and System/36 computers.

SSA's current BPCS products include the following:

- **Manufacturing Products**
 - **Material Requirements Planning (MRP)** identifies purchasing and production scheduling actions that are needed in response to day-to-day events.
 - **JIT/Repetitive Manufacturing** provides support for just-in-time manufacturing techniques and support for repetitive process manufacturers (not available for the System/36).
 - **Manufacturing Data Management** allows the retrieval and use of product structure and routing information for planning and costing needs.
 - **Shop Floor Control** provides current status of jobs, work-in-process, and production activity to permit detailed planning and scheduling.
 - **Master Production Scheduling** identifies production planning actions that need to be taken in response to day-to-day events and ties overall business planning to detail operations.
 - **Capacity Planning** identifies potential capacity bottlenecks and backlog problems so that adjustments can be made.
 - **Cost Accounting** controls purchasing, jobs, and manufacturing cost information.
 - **Performance Measurement** provides feedback and accountability in several key management areas to allow executives to monitor and compare the performance of their business against plan (not available for the System/36).
 - **CIMPathTM** automates data collection and updates from the plant floor or distribution center via scanners, magnetic card readers, hand held devices, voice input, scales, and other devices (not available for the System/36).
 - **Advanced Process** supports process industry companies in application areas such as lot level potency, batch balancing,

physical versus theoretical quantities, full notes subsystems, lot tracking, and traceability.

- Multi-Facility Support, introduced during 1990, allows configuration of BPCS applications and transmission of operation data across a network of AS/400s and supports centralized and decentralized operating functions.
- Distribution Products
 - Inventory Management allows processing of information on finished goods, work-in-process, and raw material inventory and provides summary and detail analysis on demand for both accounting and production control purposes.
 - Distribution Resources Planning (DRP) identifies demand on distribution centers and resulting impact on resupply facilities and presents transportation loading and scheduling information (not available for the System/36).
 - Order Processing processes entry and disposition of customer orders; provides automatic pricing, inventory allocation, and information for production and accounting projections; and allows printing of customer acknowledgements and shipping documents.
 - Billing and Sales Analysis allows customer orders to be billed after shipment. Invoices are printed and inventory, sales, and accounting information is maintained automatically.
 - Purchasing links planning, requisitioning, receiving, and inspection to inventory stocks to permit evaluation of vendors and purchasing performance, and prints purchase orders and receiving documents.
 - Forecasting provides for statistical forecasts of future customer sales.
- Financial Products
 - General Ledger and Financial Retrieval System provides for accumulation of financial information to support accounting functions, allows analysis of information for management decision making, and allows for user-defined financial reporting.

- Accounts Payable provides for the control and processing of payables information.
- Accounts Receivable collects and disseminates cash flow information aimed at accelerating collection, assessing credit, and reducing bad debt.
- Multi-Currency provides multiple currency operations for the financial, inventory, order processing, billing, and sales applications.
- Currency Translation allows consolidation, reporting, and analysis of multiple currency financial data.
- Payroll (U.S. only) provides control and processing of payroll information with tax calculations, supporting all 50 states. The system allows user-defined deductions, prints checks, and produces tax reports.
- Decision Support Products
 - Information Retrieval provides access to the applications data base, and allows technical and non-technical end users to access information from up to 15 files at once, manipulate that information, and output it in the form of reports, on-line graphs, or file interfaces.
 - Business Modeling provides full function spreadsheet capabilities as well as a direct data base interface to any existing application.
 - Electronic Mail allows users to create, send, receive, file, and print communications electronically (not available on the System/36).

SSA has licensed nearly 40,000 BPCS products to over 4,000 companies worldwide.

- The BPCS products currently range in price from \$3,000 to \$50,000 per product.
- Annual maintenance fees range from 12% to 15% of the current list price for each installed product.

During fiscal 1990, SSA licensed over 250 CASE products worldwide, generating revenues in excess of \$7 million. SSA currently offers the following CASE software products for IBM AS/400 environments:

- AS/SET, introduced in November 1989, is a CASE software engineering tool designed to increase programmer/analyst productivity on the IBM AS/400. AS/SET became available on January 31, 1990. The product ranges in price from \$20,000 to \$70,000, depending on the number of users and the AS/400 model used.
- AS/SET Integrator™ provides integration between AS/SET and selected front-end workstation-based CASE tools.
- AS/NET™ is a networking product that permits transmission of any type of information among multiple CPUs in an AS/400 network.

Affiliates are responsible for marketing and sales and implementation services, including education, project management, and customization. SSA provides technical, applications, and sales training; marketing and technical support; and emergency customer service to its affiliates. SSA also takes primary sales responsibility for large accounts.

Industry Markets

SSA's revenue is derived primarily from the discrete manufacturing, process manufacturing, and distribution industries.

The target markets for the BPCS product line include manufacturers with annual revenues ranging from \$5 million to \$500 million, distributors with annual revenue ranging from \$10 million to \$500 million, and larger companies looking for common systems across a number of installations that can be implemented and supported locally.

Currently, the majority of the company's BPCS customers are intermediate sized companies. However, with the global management capacities of the BPCS product line, a significant and increasing portion of sales are to larger companies. To date, SSA has made sales to divisions or subsidiaries of over 300 of the combined Fortune 500 and Fortune International companies.

The target market for SSA's CASE products consists of BPCS target customers as well as other AS/400 users with a need to develop customized software tools.

Geographic Markets

Approximately 43% of SSA's fiscal 1990 revenue was derived from the U.S. The remaining 57% was derived from various international sources.

A three-year summary of source of revenue follows:

SYSTEMS SOFTWARE ASSOCIATES, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
 (\$ millions)

	FISCAL YEAR					
	10/90		10/89		10/88	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$53.4	43%	\$53.7	56%	\$36.6	59%
Europe/Middle East	48.0	39%	23.4	25%	13.4	22%
Other (a)	22.8	18%	17.9	19%	11.5	19%
TOTAL	\$124.2	100%	\$95.0	100%	\$61.5	100%

(a) Includes sales from Asia/Pacific, Canada, and Latin America.

The entire BPCS product line is available in English, and a substantial portion of the line is available in Dutch, French, German, Ideographic Chinese, Ideographic Japanese, Italian, Korean, Spanish, Portuguese, Swedish, and Finnish.

SSA regional offices are located in Chicago, Buenos Aires, London, Sydney, Singapore, and Tokyo.

SSA has 115 affiliates with offices in 45 countries. Of these, 53 affiliates sell BPCS and CASE products, 33 sell BPCS only, and 29 sell CASE products only.

COMPANY PROFILE

SYSTEM SOFTWARE ASSOCIATES, INC.

200 West Madison
Suite 2850
Chicago, IL 60606
(312) 641-2900

Roger E. Covey, Chairman and President
Public Corporation, OTC
Total Employees: 285 (1/89)
Total Revenue, Fiscal Year End
10/31/88: \$61,524,727

The Company

System Software Associates, Inc. (SSA), founded in 1981, develops, markets, and supports the Business and Planning Control System (BPCS), an integrated line of business application software for IBM AS/400, System/38, and System/36 computers that are designed for manufacturing, distribution, and financial applications. The products are marketed through SSA's major accounts division, SSA branch offices, and a network of 46 independent companies (affiliates) with offices in 28 countries.

- During 1987 SSA acquired three of its affiliate operations and established a Corporate Customer Support group, all of which provide professional services on a fee basis.
- During 1987 SSA also entered into the hardware business as a result of its acquisition of ASE Services, Inc. (an IBM Industry Remarketer) and the introduction of its computer-integrated manufacturing (CIM) product, CIMPath™.
- In February 1987, SSA made an initial public offering of approximately 1.4 million shares of common stock, of which over 900,000 shares were offered by SSA and the remaining shares by selling stockholders. Net proceeds to the company of approximately \$10.5 million have been used primarily for the acquisitions made during fiscal 1987.

Fiscal 1988 revenue reached \$61.5 million, a 99% increase over fiscal 1987 revenue of \$30.9 million. Net income rose 89%, from \$3.3 million in fiscal 1987 to over \$6.2 million in fiscal 1988. A five-year financial summary follows:

**SYSTEM SOFTWARE ASSOCIATES, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	10/88	10/87	10/86	10/85	10/84
Revenue	\$61,525	\$30,893	\$16,087	\$9,439	\$3,972
• Percent increase from previous year	99%	92%	70%	138%	555%
Income before taxes	\$9,750	\$5,962	\$3,260	\$1,953	\$1,013
• Percent increase from previous year	64%	83%	67%	93%	*
Net income	\$6,248	\$3,302	\$1,760	\$1,055	\$553
• Percent increase from previous year	89%	88%	67%	91%	*
Earnings per share (a)	\$0.80	\$0.45	\$0.29	\$0.19	\$0.12
• Percent increase from previous year	78%	55%	53%	58%	*

* Percent change exceeds 1,000%

(a) Restated to reflect a 3-for-2 common stock split, effected as a stock dividend, effective January 17, 1989.

SSA management attributes revenue increases during fiscal 1988 and 1987 to increased sales by existing affiliates, the addition of new affiliates in geographic territories where SSA previously had no affiliates, the introduction of new products, price increases on the System/38 version of BPCS in late 1987, the introductions in June 1988 of a native mode BPCS product to run on IBM's AS/400 line of computers, and the impact of acquisitions.

Acquisitions made by SSA include the following:

- In October 1987, SSA acquired certain assets and the business of Admin EDP Pty Ltd., its Australian affiliate, for approximately \$2.1 million in cash and 29,815 shares of common stock.
- In June 1987, SSA acquired Outlook, Inc., a provider of decision support software for the IBM 3X product line.
- In June 1987, SSA acquired ASE Services, Inc., its New England affiliate, for \$4.2 million in cash and 16,833 shares of common stock.

- In December 1986, SSA purchased Syncrocom, Inc., its Chicago area affiliate, for approximately \$540,000 in cash and stock.

SSA's primary worldwide competitor is IBM and its MAPICS product.

Key Products and Services

Approximately 73% of SSA's fiscal 1988 revenue was derived from application software products and associated support services, 15% from professional services, and 12% from hardware sales.

A three-year source of revenue summary follows:

SYSTEM SOFTWARE ASSOCIATES, INC. THREE-YEAR SOURCE OF REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR					
	10/88		10/87		10/86	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software products	\$44.9	73%	\$26.1	84%	\$16.1	100%
Professional services	9.4	15%	3.1	10%	--	--
Hardware	7.2	12%	1.7	6%	--	--
TOTAL	\$61.5	100%	\$30.9	100%	\$16.1	100%

SSA's software product line--known as the Business Planning and Control System (BPCS)--consists of over 25 integrated products designed for manufacturing, distribution, and financial applications for IBM AS/400, System/38, and System/36 computers.

In June 1988, SSA announced the availability of its complete line of products (BPCS/400) in native mode on the AS/400 concurrently with the IBM announcement of this new line of midrange computers. SSA expects that the AS/400 will be the primary platform for its products in the foreseeable future.

SSA's current BPCS products include the following:

- Manufacturing Products

- Material Requirements Planning (MRP) identifies purchasing and production scheduling actions that are needed in response to day-to-day events.
- JIT/Repetitive Manufacturing provides support for just-in-time manufacturing techniques and support for repetitive process manufacturers (not available for the System/36).
- Manufacturing Data Management allows the retrieval and use of product structure and routing information for planning and costing needs.
- Shop Floor Control provides current status of jobs, work-in-process, and production activity to permit detailed planning and scheduling.
- Master Production Scheduling identifies production planning actions that need to be taken in response to day-to-day events and ties overall business planning to detail operations.
- Capacity Planning identifies potential capacity bottlenecks and backlog problems so that adjustments can be made.
- Cost Accounting controls purchasing, jobs, and manufacturing cost information.
- Performance Measurement provides feedback and accountability in several key management areas to allow executives to monitor performance of their business against plan (not available for the System/36).
- CIMPath automates data collection and updates from the plant floor or distribution center via scanners, magnetic card readers, hand held devices, voice input, scales, and other devices.
- Advanced Process Industries, introduced in 1988, supports process industry companies in application areas such as lot level potency, batch balancing, physical versus theoretical quantities, full notes subsystems, lot tracking, and traceability.

- Distribution Products

- Inventory Management allows processing of information on finished goods, work-in-process, and raw material inventory

and provides summary and detail analysis on demand for both accounting and production control purposes.

- Distribution Resources Planning (DRP) identifies demand on distribution centers and resulting impact on resupply facilities and presents transportation loading and scheduling information (not available for the System/36).
- Order Processing processes entry and disposition of customer orders; provides automatic pricing, inventory allocation, and information for production and accounting projections; and allows printing of customer acknowledgements and shipping documents.
- Billing and Sales Analysis allows customer orders to be billed after shipment. Invoices are printed and inventory, sales, and accounting information is maintained automatically.
- Purchasing links planning, requisitioning, receiving, and inspection to inventory stocks to permit evaluation of vendors and purchasing performance; and prints purchase orders and receiving documents.
- Forecasting provides for statistical forecasts of future customer sales.
- Financial Products
 - General Ledger and Financial Retrieval System provides for accumulation of financial information to support accounting functions and allows analysis of information for management decision making; and allows for user-defined financial reporting.
 - Accounts Payable provides for the control and processing of payables information.
 - Accounts Receivable collects and disseminates cash flow information aimed at accelerating collection, assessing credit, and reducing bad debt.
 - Multi-Currency provides multiple currency operations for the financial, inventory, order processing, billing, and sales applications.
 - Currency Translation allows consolidation, reporting, and analysis of multiple currency financial data.

- Payroll (U.S. only) provides control and processing of payroll information with tax calculations, supporting all 50 states. The system allows user-defined deductions, prints checks, and produces tax reports.
- Decision Support Products
 - Information Retrieval provides access to the application data base; allows technical and non-technical end users to access information from up to 15 files at once, manipulate that information, and output it in the form of reports, online graphs, or file interfaces.
 - Business Modeling provides full function spreadsheet capabilities as well as a direct data base interface to any existing application.
 - Electronic Mail allows users to create, send, receive, file, and print communications electronically (not available on the System/36).

SSA has licensed over 20,000 BPCS products to over 3,000 companies worldwide. The BPCS products currently range in price from \$3,000 to \$30,000 per module. Annual maintenance fees are 12% of the current list price for each installed product.

Affiliates are responsible for product installation and support services. SSA provides technical, application, and sales training; marketing and technical support; and emergency customer service to its affiliates. SSA also takes primary sales responsibility for large accounts.

Industry Markets

SSA's revenue is derived primarily from the discrete manufacturing and distribution industries.

The target market for the BPCS product line includes manufacturers with annual revenue ranging from \$5 million to \$300 million, distributors with annual revenue ranging from \$10 million to \$300 million, and divisions and subsidiaries of larger companies.

Currently, the majority of the company's customers are intermediate sized companies, but a significant and increasing portion of sales are to larger companies. To date, SSA has made sales to divisions or subsidiaries of over 150 of the combined Fortune 500 and Fortune International 500.

Geographic Markets

Approximately 59% of SSA's fiscal 1988 revenue was derived from the U.S. The remaining 41% was derived from various international sources.

A three-year summary of source of revenue follows:

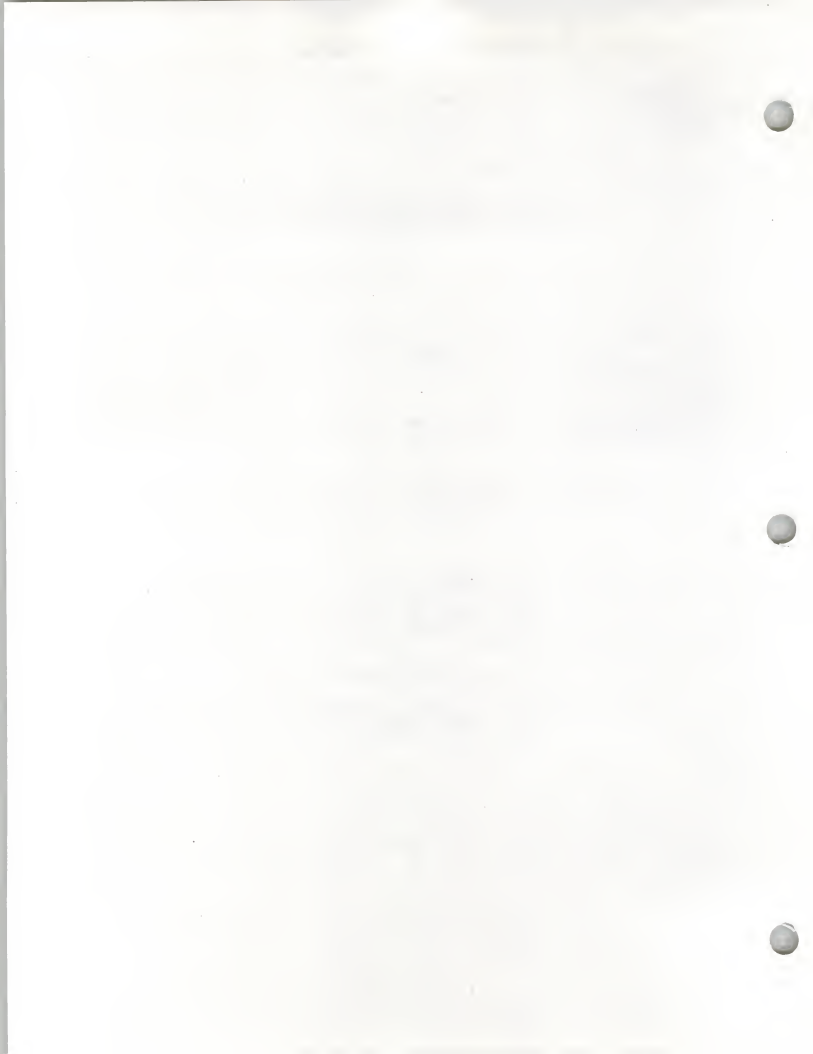
**SYSTEMS SOFTWARE ASSOCIATES, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	10/88		10/87		10/86	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$36.6	59%	\$19.3	62%	\$10.3	64%
Europe/Middle East	13.4	22%	4.0	13%	1.7	11%
Asia/Pacific	8.1	13%	5.2	17%	2.9	18%
Canada/Latin America	4.4	6%	2.4	8%	1.2	7%
TOTAL	\$61.5	100%	\$30.9	100%	\$16.1	100%

The entire BPCS product line is available in English, and substantially all of the line is available in French, German, Hebrew, Ideographic Chinese, Italian, Japanese, Korean, and Spanish.

SSA currently has 46 affiliates in 28 countries.

SSA-owned offices are located in Chicago, Brookfield (WI), Holliston (MA), Enfield (CT), London (U.K.), Sydney (Australia), and Singapore.



COMPANY PROFILE

SYSTEM SOFTWARE ASSOCIATES, INC.

200 West Madison
Suite 2850
Chicago, IL 60606
(312) 641-2900

Roger E. Covey, Chairman and
President
Public Corporation, OTC
Total Employees: 73 (1/87)
Total Revenue, Fiscal Year End
10/31/86: \$16,206,000

THE COMPANY

- System Software Associates, Inc. (SSA), founded in 1981, develops, markets, and supports an integrated line of business application software for IBM System/38 and System/36 computers that are designed for manufacturing, distribution, and financial applications. The products are marketed through a network of 36 independent companies (affiliates) with offices in 22 countries. Each affiliate has responsibility for product sales, installation, and support.
- In February 1987, SSA made an initial public offering of approximately 1.4 million shares of common stock, of which 700,000 shares were offered by SSA and the remaining shares by selling stockholders. Net proceeds to the company are estimated to be \$8.1 million.
- Fiscal 1986 revenue reached \$16.2 million, a 70% increase over fiscal 1985 revenue of \$9.5 million. Net income rose 67%, from \$1 million in fiscal 1985 to \$1.8 million in fiscal 1986. A five-year financial summary follows:

SYSTEM SOFTWARE ASSOCIATES, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

ITEM \ FISCAL YEAR	10/86	10/85	10/84	10/83	10/82
Revenue	\$ 16,206	\$ 9,508	\$ 3,972	\$ 606	\$ 155
• Percent increase from previous year	70%	139%	555%	291%	N/A
Income before taxes	\$ 3,260	\$ 1,953	\$ 1,013	\$ 33	\$ 25
• Percent increase from previous year	67%	93%	*	32%	N/A
Net income	\$ 1,760	\$ 1,055	\$ 553	\$ 33	\$ 25
• Percent increase from previous year	67%	91%	*	32%	N/A
Earnings per share	\$ 0.43	\$ 0.28	\$ 0.18	\$ 0.01	\$ 0.01
• Percent increase from previous year	54%	56%	*	-	N/A

*Percent change exceeds 1,000%

- SSA management attributes revenue increases to increased sales by existing affiliates, the addition of new affiliates in geographic territories where SSA previously had no affiliates, increased sales to large accounts, price increases on System/38 products, and the introduction of new products.
- Research and development expenditures were approximately \$1.4 million (9% of revenue) in fiscal 1986, \$828,000 (9% of revenue) in fiscal 1985, and \$330,000 (8% of revenue) in fiscal 1984.
- In December 1986, SSA purchased Syncrocom, Inc., its Chicago area affiliate, for approximately \$540,000 in cash and stock.
 - Prior to the acquisition, Syncrocom accounted for approximately \$586,000, \$923,000, and \$833,000 of SSA's software license fee revenue for fiscal 1984, 1985, and 1986, respectively.
 - Syncrocom will operate as an SSA-owned affiliate.
- Revenue for the three months ending January 31, 1987 reached \$5 million, compared to \$3.6 million for the same period a year ago. Net income for the period rose 40%, from \$362,000 to \$507,000.

SYSTEM SOFTWARE ASSOCIATES, INC.

- As of January 31, 1987, SSA had 73 employees, segmented as follows:

Sales and marketing	22
Technology group	20
Finance and administration	12
Chicago office (Syncrocom)	<u>19</u>
	73

- SSA's primary worldwide competitor is IBM and its MAPICS product. Other competition comes from Pansophic Systems, Management Science America, and American Software, as well as various smaller regional firms.

KEY PRODUCTS AND SERVICES

- One hundred percent of SSA's fiscal 1986 revenue was derived from application software fees and associated support services.
- SSA's software product line—known as the Business Planning and Control System (BPCS)—consists of over 20 integrated products designed for manufacturing, distribution, and financial applications for IBM System/38 and System/36 computers. A three-year summary of source of revenue by product area follows (\$ millions):

FISCAL YEAR ITEM	10/86		10/85		10/84	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Manufacturing products	\$ 5.8	36%	\$2.9	31%	\$1.1	28%
Distribution products	5.5	34	3.7	39	1.5	38
Financial products	3.5	22	2.1	22	1.0	26
Cross-application products	1.2	7	0.7	7	0.2	5
Other	0.2	1	0.1	1	0.1	3
Total	\$ 16.2	100%	\$9.5	100%	\$3.9	100%

- SSA's current BPCS products include the following:
 - Manufacturing products.
 - Material Requirements Planning (MRP) identifies purchasing and production scheduling actions that are needed in response to day-to-day events.

- JIT/Repetitive Manufacturing provides support for "just-in-time" manufacturing techniques and support for repetitive process manufacturers (System/38 only).
 - Manufacturing Data Management (System/38)/Bill of Materials (System/36) allows the retrieval and use of information regarding manufacturing processes and components for planning and costing needs.
 - Shop Floor Control provides current status of jobs, work-in-process, and production activity to permit detailed planning and scheduling.
 - Master Production Schedule identifies production planning actions which need to be taken in response to day-to-day events and ties overall business planning to detail operations.
 - Capacity Planning identifies potential capacity bottlenecks and backlog problems so that adjustments can be made.
 - Cost Accounting provides detail cost analysis information for both orders and products.
 - Factory Data Collection allows information to be collected from the factory floor through a variety of mechanisms such as badge readers, optical character readers, cards, process control devices, or manual entry.
- Distribution products.
- Inventory Management allows processing of information on finished goods, work-in-process, and raw material inventory and provides summary and detail analysis on demand for both accounting and production control purposes.
 - Distribution Resources Planning (DRP) identifies demand on distribution centers and resulting impact on resupply facilities and presents transportation loading and scheduling information (System/38 only).
 - Order Processing processes entry and disposition of customer orders and provides customer service information; and allows printing of customer acknowledgements and shipping documents.
 - Billing and Sales Analysis allows customer orders to be billed, with inventory, sales, and accounting information maintained automatically.
 - Sales Retrieval System provides for user-defined sales data, order data, and sales history (System/36 only).

- Purchasing links planning, requisitioning, receiving, and inspection to inventory stocks to permit evaluation of vendors and purchasing performance; and prints purchase orders and receiving documents.
- Forecasting provides for statistical forecasts of future customer sales.
- Financial products.
 - General Ledger and Financial Retrieval System provides for accumulation of financial information to support accounting functions and allows analysis of information for management decision-making; and allows for user-defined financial reporting.
 - Accounts Payable provides for the control and processing of payables information.
 - Accounts Receivable collects and disseminates cash flow information aimed at accelerating collection, assessing credit, and reducing bad debt.
 - Multiple Currency provides multiple currency operations for the financial, inventory, order processing, billing, and sales products.
 - Currency Translation allows consolidation, reporting, and analysis of multiple currency financial data.
- Cross-application products.
 - Concepts and Applications Education provides a structured, hands-on training course for BPCS users which includes case studies, actual computer operations, and classroom material.
 - Performance Measurement provides feedback and accountability in several key management areas to allow executives to monitor performance of their business against plan (System/38 only).
 - Information Retrieval allows non-technical end users to develop their own reports and inquiries, and thus extract data in a format useful to them.
- There are currently over 10,000 BPCS products licensed to over 1,000 companies worldwide. The BPCS products currently range in price from \$1,500 to \$12,000, with a total product line value of over \$210,000 on the System/38 and \$70,000 on the System/36.
- Affiliates are responsible for product installation and support services. SSA provides technical, application, and sales training; marketing and technical

SYSTEM SOFTWARE ASSOCIATES, INC.

support; and emergency customer service to its affiliates. SSA also takes primary sales responsibility for large accounts.

INDUSTRY MARKETS

- SSA's revenue is derived primarily from the discrete manufacturing and distribution industries.
- The target market for the BPCS product line includes manufacturers with annual revenue ranging from \$5 million to \$200 million, distributors with annual revenue ranging from \$10 million to \$200 million, and divisions and subsidiaries of larger companies.
- Currently, the majority of the company's customers are intermediate sized companies, but a significant and increasing portion of sales are to larger companies. To date, SSA has made sales to divisions or subsidiaries of over 100 of the combined Fortune 500 and Fortune International 500, including the following:
 - American Cyanamid Company.
 - American Home Products Corporation.
 - Avery International Corporation.
 - Beatrice Companies, Inc.
 - Borg-Warner Corporation.
 - Bristol-Myers Company.
 - Burmah Oil PLC.
 - Ciba-Geigy AG.
 - Eli Lilly & Company.
 - Emerson Electric Company.
 - Federal-Mogul Corporation.
 - Johnson & Johnson.
 - Nestle S.A.
 - Norton Company.
 - Procter & Gamble Company.
 - R.J. Reynolds Industries, Inc.
 - Ralston Purina Company.
 - Sandoz AG.
 - SmithKline Beckman Corporation.
 - Teledyne, Inc.
- SSA's five largest affiliates accounted for approximately 53% of fiscal 1986 revenue and three contributed 10% or more as follows:
 - ASE Services, Inc., based in Massachusetts and Connecticut, accounted for 15% of fiscal 1986 revenue.
 - Omegas Group, based in Kentucky, Georgia, and Ohio, accounted for 11% of fiscal 1986 revenue.

SYSTEM SOFTWARE ASSOCIATES, INC.

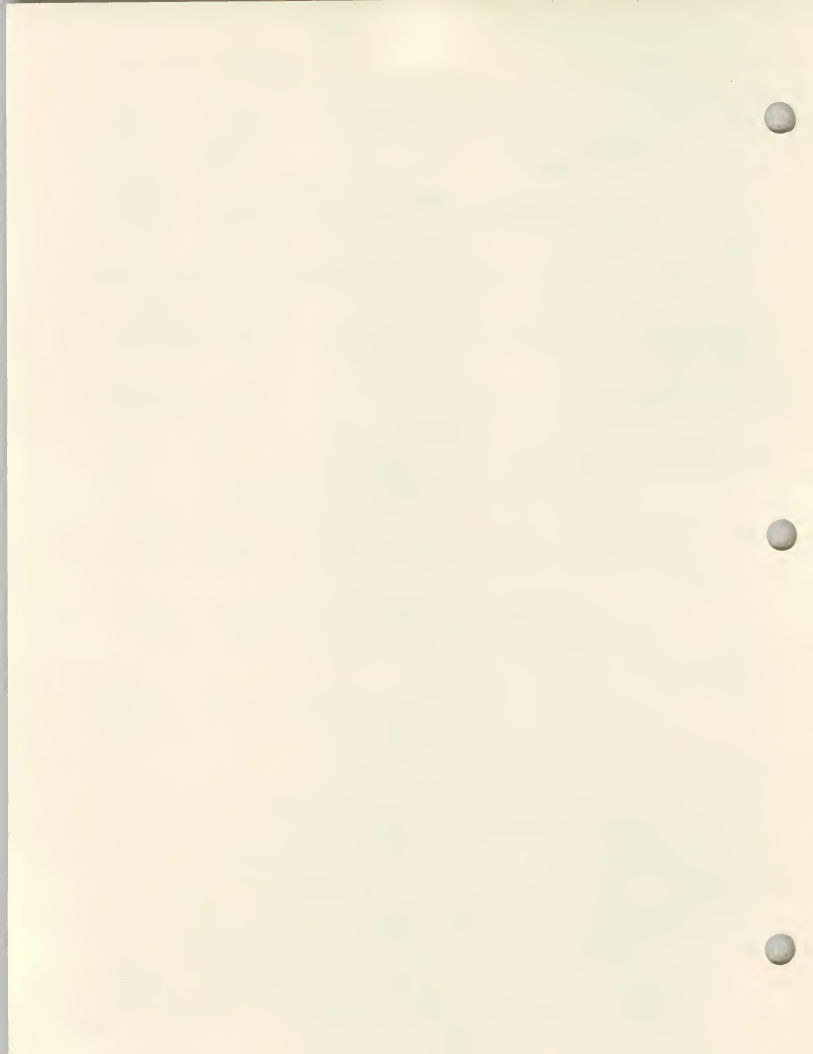
- Admin EDP Pty. Limited, based in Australia, accounted for 10% of fiscal 1986 revenue.

GEOGRAPHIC MARKETS

- Approximately 64% of SSA's fiscal 1986 revenue was derived from the U.S. and 36% from international sources. A three-year summary of source of revenue follows (\$ millions):

FISCAL YEAR ITEM	10/86		10/85		10/84	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
U.S.	\$10.4	64%	\$7.3	77%	\$3.2	82%
Asia/Pacific	2.9	18	1.1	12	0.5	13
Europe/Middle East	1.7	10	0.6	6	0.1	3
Canada/Latin America	1.2	8	0.5	5	0.1	2
Total	\$16.2	100%	\$9.5	100%	\$3.9	100%

- SSA has 36 affiliates with offices in 22 countries, including 15 affiliates in the U.S.
 - U.S. affiliate offices are located in Atlanta, Boston, Buffalo, Chicago, Cleveland, Dallas, Denver, Grand Rapids, Greensboro, Hartford, Houston, Indianapolis, Kansas City, Los Angeles, Louisville, Miami, Minneapolis, New York, Philadelphia, Portland, St. Louis, San Francisco, and South Bend.
 - Foreign affiliates are located in Argentina, Australia, Canada, Columbia, Denmark, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Puerto Rico, Singapore, Spain, Taiwan, the U.K., and Venezuela.



COMPANY PROFILE

SYSTEMATICS, INC.

4001 Rodney Parham Road
Little Rock, AR 72212
(501) 220-5100

John E. Steuri, Chairman and CEO
Stephen A. Carns, President and COO
Wholly Owned Subsidiary of
ALLTEL Corporation
Total Employees: 4,469 (12/91)
Total Revenue, Fiscal Year End
12/31/91: \$377,252,000

The Company

Systematics, Inc., founded in 1968, provides systems operations (outsourcing) and disaster recovery processing services, applications software products, consulting and training professional services, and turnkey systems to the banking and finance industry. As a result of an acquisition made during 1990, the company also provides systems operations processing services and applications software products to the telecommunications industry.

Effective May 31, 1990, Systematics was acquired by ALLTEL Corporation of Hudson (OH) in a pooling-of-interests transaction valued at \$500 million.

- ALLTEL, with 1991 revenue of nearly \$1.75 billion, provides local telephone services, cellular services, and telecommunications equipment.
- The agreement strengthens both organizations. Systematics has gained access to the capital it needs to acquire third-party processing vendors and ALLTEL expanded its activities into the information processing services business, an area in which it can offer complementary communications skills and services.
- Systematics' current strategy is to expand in its chosen markets--banking and telecommunications--and to seek markets in other business sectors that are synergistic with its expertise. The company currently derives approximately 85% of its revenue from its existing customer base and adds 15% from new accounts.

In February 1992, to further leverage Systematics' growth potential, ALLTEL acquired Computer Power, Inc. (CPI) of Jacksonville (FL) for approximately 7.7 million shares of ALLTEL common stock.

- CPI is a leading provider of processing services and applications software to financial institutions originating and/or servicing single-family mortgage loans. CPI's services are currently provided to over 252 financial institutions nationwide.
- CPI had approximately 500 employees at the time of the acquisition and annual revenue of \$100 million.
- CPI now operates as a division of Systematics.

Systematics' 1991 revenue reached \$377.3 million, a 48% increase over 1990 revenue of \$254.8 million. Operating income rose 15%, from \$34.2 million in 1990 to \$39.3 million in 1991. In the five-year summary that follows, Systematics' financials prior to 1991 have been restated to reflect a change in fiscal year end from May 31 to December 31 to coincide with ALLTEL's fiscal year end.

SYSTEMATICS, INC.
FIVE-YEAR FINANCIAL SUMMARY
 (\$ millions)

ITEM	FISCAL YEAR				
	1991	1990	1989	1988	1987
Revenue	\$377.3	\$254.8	\$224.0	\$196.9	\$163.1
• Percent increase from previous year	48%	14%	14%	21%	25%
Operating income	\$39.3	\$34.2	\$32.0	\$27.6	\$19.7
• Percent increase from previous year	15%	7%	16%	40%	16%
Net income	N/A	\$21.7	\$20.8	\$17.8	N/A
• Percent increase from previous year	N/A	4%	17%	N/A	N/A

Systematics' management attributes the company's growth in revenue during 1991 to new facilities management contracts and remote processing contracts, including telecommunications operations, additional services provided under existing facilities management contracts (net of non-renewals), and increased software license and maintenance revenues.

- At the end of 1991, Systematics' committed contract revenues from systems operations and software agreements totaled \$1.3 billion, of which \$0.8 billion came from the Financial Services Division and \$0.5 billion from the Telecommunications Services Division.

- The growth in operating income was not as rapid as the growth in revenue due to expenses in new financial and telecommunications business units, continued investment in the international marketplace, and, to a lesser extent, increased depreciation, marketing, and other operating expenses.

A summary of prior acquisitions made by Systematics includes the following:

- In November 1990, Systematics acquired the Virtuoso™ cellular telephone billing and information system of C-TEC Corporation. In addition, C-TEC signed a long-term agreement calling for Systematics to provide virtually all data processing services for C-TEC's telephone, cable television, and cellular operations.
- In October 1990, Systematics expanded its loan processing services with the acquisition of Computer Dynamics, Inc. (CDI) of Little Rock (AR). CDI's mortgage software and data processing operations have been merged into Systematics.
- In July 1990, Systematics acquired Horizon Financial Software Corporation of Orlando (FL). Horizon provided IBM AS/400-based software and turnkey financial systems to community banks. Systematics has consolidated its various AS/400-based systems into a single offering, the Horizon system.
- During 1989, Systematics purchased the Marine Bank Services Corporation of BancOne Wisconsin, located in Milwaukee. Systematics now provides processing for selected BancOne affiliates and correspondents.

Systematics is currently organized as follows:

- Financial Services provides systems operations and disaster recovery processing services, applications software products, consulting and training professional services, and turnkey systems to the banking and finance industry.
- Five Financial Services divisions, each headed by a senior vice president, are responsible for systems operations activities in their respective geographic areas.
- The Software Division is responsible for marketing applications software products and supporting software clients.
- Outsourcing Marketing is responsible for marketing processing (outsourcing) services.

- Technical Services is responsible for the development, maintenance, and customer support of all Systematics' software.
- Professional Services provides consulting, disaster recovery, branch automation, and training services.
- A Training Division provides client and employee training.
- The International Division markets and supports application products and services for customers primarily located outside the U.S.
- The Mid-Range Systems Division markets software products and AS/400-based turnkey systems to smaller banks and thrifts.
- Telecommunications Services provides systems operations processing services and applications software products to the telecommunications industry.
- Computer Power, Inc. provides mortgage loan processing services and applications software to financial institutions.
- Corporate support units include Finance/Accounting; General Counsel; and Personnel, Communications, and Facilities.

Systematics' major competitors include Electronic Data Systems, IBM, FIserv, Hogan Systems, and First Financial Management Corporation.

Key Products and Services

Approximately 85% of Systematics' 1991 revenue was derived from systems operations, 12% from applications software products, and 3% from consulting, education and training, and disaster recovery planning.

Systematics' products and services are designed for the financial industry (banks, savings institutions, credit unions, mortgage service, and finance companies) and for the telecommunications industry (telephone and cellular companies).

Financial Services:

Systematics currently operates some 70 data centers, in which a majority (90%) of the equipment is owned by Systematics. For most of these centers, the client provides space to locate equipment close to the client's operation. In three of the 70 Systematics-owned

centers, services are provided for multiple clients in a remote processing arrangement.

Systematics' systems operations (outsourcing) contracts are generally marketed to larger banks, those with deposits ranging from \$500 million to \$20 billion or more. More than 40 of its outsourcing clients are financial institutions whose assets exceed \$1 billion.

- The computer hardware and data center staff are located in or near the bank.
- Such contracts usually have a term of five to ten years and include a 99-year nonexclusive license for the client to use the software for internal processing.
- Systematics currently is providing services under 67 on-site outsourcing contracts.

A remote services contract, generally five years in length, is used for the company's smaller bank clients. The company's three data centers in Little Rock, Albany, and Milwaukee serve over 200 remote services customers. The primary difference in services offered between on-site and remote processing is the physical location of the IBM mainframes and the amount of on-site support.

Software Solutions:

Systematics has developed a complete set of integrated banking and financial applications software termed Systematics Integrated Financial Software.

- Systematics software products run on IBM mainframes under DOS/VSE, VM, and MVS.
- All of the applications available through Systematics' systems operations processing services may be purchased as individual software products or as a total integrated system. All products are backed by training, documentation, product enhancements, supporting and consulting.
- There are currently 137 clients who have purchased the software for in-house use.

Software products include:

- *Delivery Systems:*
 - Transaction System
 - Branch Automation
 - ATM System
 - Voice Response
- *Management Systems:*
 - Customer Management Systems
 - Customer Information File
 - Customer Service Management
 - Customer Statement System
 - Profitability and Account Analysis
 - Customer Reference File
 - Tax Reporting
 - Financial Management Systems
 - General Ledger
 - Accounts Payable
 - Asset Liability Management
 - Executive Information Systems
 - Systematics Information Management System (SIMS)
- *Servicing Systems:*
 - Deposit Systems
 - Demand Deposits
 - Savings/Time Deposits
 - Certification Tracking
 - Item Reconciliation
 - Loan Systems
 - Loan Origination
 - Consumer Lending (includes student loan portfolios)
 - Commercial Loans
 - Mortgage Servicing
 - Collections
- International capabilities for Systematics' software include an Origination and Warehouse System, Translator Facility, and multicurrency features.

The Asset Liability Management System (ALMS) product is also separately available for IBM and compatible microcomputers.

Systematics' wholesale banking software is an integrated, multicurrency package designed to run in a PC LAN, UNIX, or IBM AS/400 environment. Wholesale software includes the following modules:

- Financial Management
- Customer Liability Limit Control
- Letters of Credit
- Import and Export Bills
- Customer Originated Letters of Credit
- Foreign Exchange and Money Market Operations
- Margin Trading
- Commodities
- Share Financing
- Foreign Currency Deposits
- Loans Management
- Remittances
- Testkey

Systematics also markets Horizon, a multibank, multibranch system for community banks with \$50 million to \$400 million in deposits.

- Horizon is an AS/400-based system available as a software product or a turnkey system.
- Applications supported include:
 - Proof of Deposit
 - Demand Deposit
 - Savings, Christmas Club, CDs, and IRAs
 - Installment and Commercial Loans
 - General Ledger
 - Automated Clearing House
 - Account Reconciliation
 - Safe Deposit Box Accounting
 - Shareholder Accounting
 - ATMs
 - Report Generator
 - Word Processing
 - Asset/Liability Management System
- There are currently approximately 50 Horizon customers.

Disaster Recovery:

Customers, primarily financial institutions, may subscribe to either a shell facility or a fully-equipped facility, generally for a term of five years.

Disaster backup services are marketed only to Systematics' contract clients.

Consulting Services:

Systematics provides a range of consulting services that address business issues and the application of technology to improve productivity and financial performance.

- The services are geared to the financial industry, where Systematics offers applications software solutions.
- Consultants are experienced, successful bankers.

Systematics' business consulting services focus on the following banking lines:

- Back-office operations
- Retail banking and delivery systems
- Lending and loan operations
- MIS and technology
- Trust business

Training:

Systematics assists financial services clients in implementing training (i.e., for conversions) in their organizations. Training services assistance includes:

- Assessing needs
- Developing strategy
- Developing/customizing courses and course materials
- Training/coaching trainers
- Post-conversion training reviews

Formal courses are offered through Systematics' Career Development Center in Little Rock, providing training support for Systematics' software products to employees and clients.

- Courses are offered in the principles of banking, supervision, management, basic and advanced programming, systems design

and architecture, and in-depth studies of individual Systematics applications.

- Courses are delivered via classroom, computer-based training, and custom-developed workbooks.
- Nearly 4,000 classroom courses were taken in 1992 by clients and employees, and more than 10,000 non-classroom courses were completed.

Branch Automation Services:

Systematics' branch automation solution is a set of products that operate on PC LANs in branch offices and that are compatible with Systematics' host banking applications.

- Systematics provides an authoring tool, model transaction sets for teller and platform functions, and the host connectivity software that allows the branches to access files at the central mainframe computer.

To reduce the risk and time to implement a branch automation system, Systematics will provide complete turnkey or partial systems integration services, including:

- Cost justification analysis
- Project planning
- Project management
- Vendor management
- Application customization
- Work flow redesign
- Technical and user training
- Hardware and software installation
- Branch user manuals
- Field service and help desk

Computer Power, Inc.:

CPI is a leading provider of data processing services to financial institutions originating and/or servicing single-family mortgage loans. Other services include consulting, training, and portfolio conversion.

CPI also offers a set of proprietary applications software products for IBM computers that include:

- Mortgage Servicing Package
- Residential Loan Inventory Control Package
- Residential Loan Production Control Package

Telecommunications Services:

Virtuoso, acquired from C-TEC during 1990, is a cellular telephone billing and information system for IBM AS/400 and mainframe computers targeted to telephone companies. Modules include:

- Marketing
- Credit Bureau Interface
- Account Management
- Switch Management/Service Order Processing
- Point-of-Sale/Inventory Management
- Accounts Receivable
- Collections/Treatment
- Commissions
- Customer Care
- Billing
- Roamer Processing
- Unbilled Call Access

Virtuoso is currently used by six clients worldwide.

During 1991, Systematics signed a multimillion-dollar agreement with Unitel, a personal communications network consortium in the U.K. Under the terms of the agreement Systematics will provide Unitel with its Virtuoso cellular billing and management information software, consulting, installation and training, and ongoing software support.

Systematics also provides systems operations processing support for C-TEC's telephone, cable television, and cellular operations.

Industry Markets

Approximately 85% of Systematics' 1991 revenue was derived from the banking and finance industry, including commercial banks, savings and loan institutions, credit unions, and mortgage and finance companies. The remaining 15% of revenue was derived from the telecommunications industry, including telephone companies and cellular companies.

The majority of revenue is derived from commercial banks with deposits over \$1 billion.

There are currently approximately 1,000 banks and financial institutions being served by Systematics. Customers include

Republic National Bank (NY), Integra Corporation (Pittsburgh), Mitsui Manufacturers Bank (Los Angeles), Chemical Banking Corporation (NY), Team Bank (TX), Peoples' Heritage Bank (ME), and City National Bank (CA).

Geographic Markets

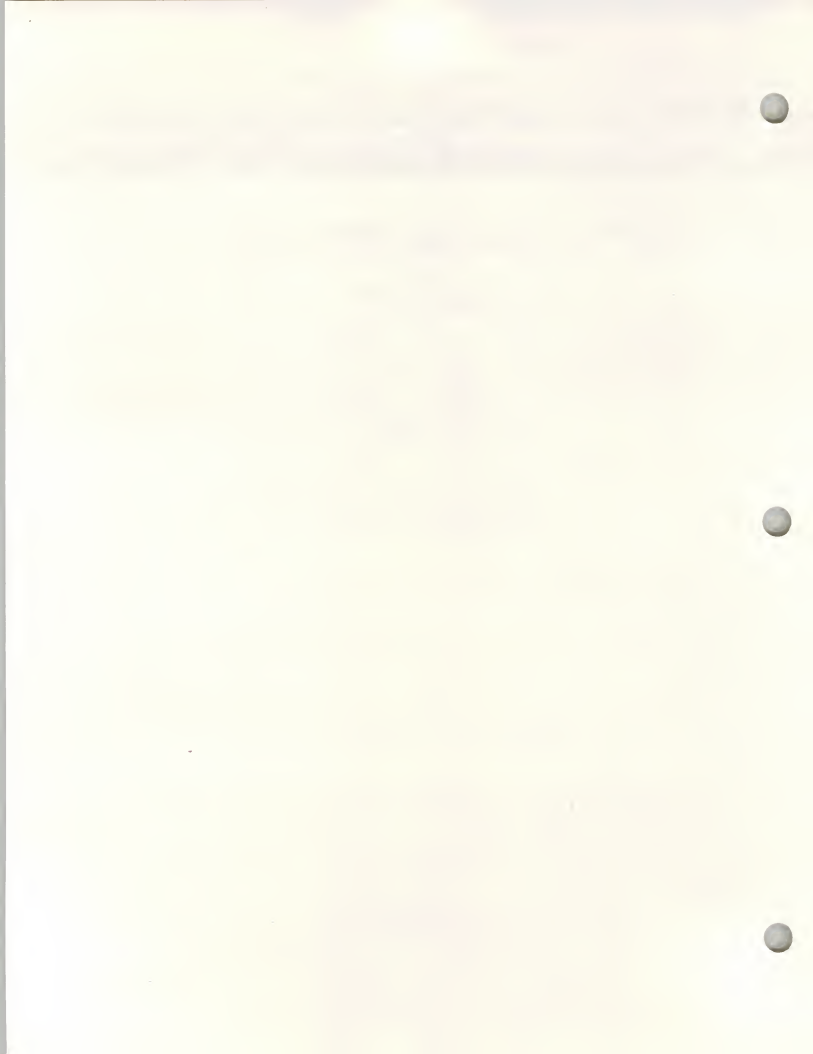
Systematics derived approximately 94% of its 1991 revenue from the U.S. and 6% from international sources.

Systematics currently serves customers in 46 states and in 26 countries outside the U.S.

Systematics also has regional offices in the U.K. and Singapore that handle sales and support in those regions.

In September 1991, Systematics announced a worldwide strategic alliance with Andersen Consulting to jointly pursue financial services clients seeking outsourcing, software, and systems integration expertise.

During 1991, Systematics continued to sign contracts with international clients, including banks in the U.K., Finland, Thailand, Bermuda, and the Philippines.



COMPANY PROFILE

SYSTEMATICS, INC.

4001 Rodney Parham Road
Little Rock, AR 72212
(501) 220-5100

John E. Steuri, Chairman, President,
and CEO
Wholly Owned Subsidiary of
ALLTEL Corporation
Total Employees: 4,210
Total Revenue, Fiscal Year End
12/31/90: \$254,800,000

The Company

Systematics, Inc., founded in 1968, provides systems operations (facilities management) and disaster recovery processing services, application software products, consulting and training professional services, and turnkey systems to the banking and finance industry.

- Through 1980, Systematics operated as an unconsolidated, majority-owned (75%) subsidiary of Stephens Inc., an investment banking firm also located in Little Rock. Subsequent to public offerings of Systematic's common stock made in fiscal 1982 and 1983, Stephens' holdings in Systematics were reduced to 48.7% of the outstanding shares. Systematics derived approximately \$5 million annually from processing services provided to affiliates of Stephens.
- Effective May 31, 1990, Systematics was acquired by ALLTEL Corporation of Hudson (OH) in a transaction valued at \$500 million.
 - In connection with the merger, 1,325 shares of ALLTEL common stock were exchanged for each share of Systematics common stock (including shares owned by Stephens). The acquisition was accounted for as a pooling of interests and Systematics became a wholly owned subsidiary of ALLTEL.
 - ALLTEL, with 1990 revenue of over \$1.57 billion, provides local telephone services, cellular services, and telecommunications equipment.
 - The new agreement strengthens both organizations. Systematics gains access to the capital it needs to acquire third-party processing vendors and ALLTEL expands its activities into the information processing services business, an area in which it can offer complementary communication skills and services.

Systematics' current strategy is to expand in its chosen markets--banking and telecommunications--and to seek markets in other business sectors that are synergistic with its expertise. The company currently derives approximately 85% of its revenue from its existing customer base and adds 15% from new accounts.

Systematics' 1990 revenue reached \$254.8 million, a 14% increase over 1989 revenue of \$224.0 million. Net income rose 4%, from \$20.8 million in 1989 to \$21.7 million in 1990. In the five-year summary that follows, Systematics' financials have been restated to reflect a change in fiscal year end from May 31 to December 31 to coincide with ALLTEL's fiscal year end.

**SYSTEMATICS, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	1990	1989	1988	1987	1986
Revenue	\$254.8	\$224.0	\$196.9	\$163.1	\$131.0
• Percent increase from previous year	14%	14%	21%	25%	N/A
Operating income	\$34.2	\$32.0	\$27.6	\$19.7	\$17.0
• Percent increase from previous year	7%	16%	40%	16%	N/A
Net income	\$21.7	\$20.8	\$17.8	N/A	N/A
• Percent increase (decrease) from previous year	4%	17%	N/A	N/A	N/A

Systematics management attributes the company's growth in revenue and operating income over the past three years to new facilities management contracts and maintenance contracts.

- In 1990, revenues were offset by a decrease in software license revenues.
- In 1989, operating income increased due to the net effect of a reduction in vacation expense and the settlement of a tax dispute.
- In 1988, operating income increased primarily due to growth in software sales.

- At the end of 1990, Systematics' committed contract revenues from systems operations and software agreements were \$731 million, up 44% from year-end 1989.
- At the end of the first quarter of 1991, contracted revenues were over \$1 billion.

Acquisitions made by Systematics include the following:

- In November 1990, Systematics acquired the Virtuoso™ cellular telephone billing and information system of C-TEC Corporation.
 - Under the terms of the agreement, Systematics will pay C-TEC for the rights to the Virtuoso software, as well as a royalty on new licensing fees during a specified period.
 - In addition, C-TEC signed a long-term agreement calling for Systematics to provide virtually all data processing services for C-TEC's telephone, cable television, and cellular operations.
- In October 1990, Systematics acquired Computer Dynamics, Inc. (CDI) of Little Rock (AR).
 - CDI, with 25 employees, operates a mortgage data processing center and provides the application software to process more than 200,000 loans for 16 financial institutions in six states.
 - The operations of CDI have been merged into Systematics.
 - The acquisition allows Systematics to further leverage its loan processing capabilities and create new growth opportunities. Prior to the acquisition, Systematics annually processed 2.7 million real estate loans on behalf of financial institutions nationwide.
- In July 1990 Systematics acquired Horizon Financial Software Corporation of Orlando (FL).
 - Horizon, with 40 employees, provides IBM AS/400-based software and turnkey financial systems to community banks.
 - Systematics has consolidated its various AS/400-based systems (including its SAFE system and the Horizon system) into a single offering, the Horizon system.

- In September 1989, Systematics purchased the Marine Bank Services Corporation of BancOne Wisconsin, located in Milwaukee. Systematics now provides processing for BancOne affiliates and correspondents.

Systematics is currently organized as follows:

- Five divisions, each headed by an executive vice president, are responsible for systems operations activities in their respective geographic areas.
- Software Marketing is responsible for marketing applications software products.
- Technical Services is responsible for the development, maintenance, and customer support of all Systematics' software.
- Consulting Services provides consulting and specialized contract programming services for added client customization.
- A Training Division provides client and employee training.
- Corporate support units include Finance/Accounting; General Counsel; and Personnel, Communications, and Facilities.
- The International Division markets and supports application products for customers located outside the U.S.
- The Mid-Range Systems Division markets software products and AS/400-based turnkey systems to smaller banks and thrifts.

Systematics' major competitors include Electronic Data Systems, FIServ, Hogan Systems, and First Financial Management Corporation.

Key Products and Services

Approximately 84% of Systematics' 1990 revenue was derived from systems operations, 10% from application software products, and 6% from consulting, education and training, and disaster recovery planning. About 2% of 1990 revenue was derived from hardware sales (included in systems operations revenue above).

Systematics' products and services are designed for the financial industry (banks, savings institutions, credit unions, mortgage service, and finance companies) and for the telecommunications industry.

Systematics currently operates 70 data centers, in which a majority (90%) of the equipment is owned by Systematics. For most of these centers, Systematics leases space from the client to locate equipment close to the client's operation. In three of the 70 Systematics-owned centers, services are provided for multiple clients in a remote processing arrangement.

Systematics' systems operations (outsourcing) contracts are generally marketed to larger banks, those with deposits ranging from \$250 million to \$20 billion or more.

- The computer hardware and data center staff are located in or near the bank.
- Such contracts usually have a term of five to ten years and include a 99-year nonexclusive license for the client to use the software for internal processing.
- Systematics currently is providing services under 67 on-site outsourcing contracts.

A remote services contract, generally five years in length, is used for the company's smaller bank clients. The primary difference in services offered between on-site and remote processing is the physical location of the IBM mainframes.

- Remote services clients may elect to purchase a non-exclusive license to continue use of Systematics' software following the original term of the remote services contract.
- Three of the company's data centers are devoted to serving, on average, over 200 remote services customers.

Systematics has developed a complete set of integrated banking and financial applications software termed Systematics Integrated Financial Software. These applications, available through facilities management/remote services contracts and as software products, include the following:

- On-Line Delivery Systems (for all operating units from the back office to the ATM)
- Accounting Systems:
 - Demand Deposits
 - Loans
 - Auxiliary Accounting Systems
 - On-Line Collection Systems

- Management Systems:
 - Financial Management (FMS)
 - Asset/Liability Management (ALMS)
 - Customer Information (CIF)
 - Operating/Marketing Information (SIMS/SMART)
- Customer Service Management Systems:
 - Acquisition Control System
 - Profitability Analysis System
 - Tax Reporting System
- Transaction Delivery Systems:
 - Teller Systems
 - Branch Automation Systems
- The Asset Liability Management System (ALMS) product is also separately available for IBM and compatible microcomputers.

Systematics software products run on IBM mainframes under DOS/VSE, VM, and MVS.

- All of the applications available through Systematics' FM processing services may be purchased as individual software products or as a total integrated system.
- There are currently about 300 clients who have purchased the software for in-house use.

Systematics also provides disaster recovery, education and training, and management consulting services.

- Customers, primarily financial institutions, may subscribe to either a shell facility or a fully-equipped IBM facility, generally for a term of five years.
- Disaster backup services are marketed only to Systematics contract clients.

Systematics also markets Horizon, a multibank, multibranch system for community banks with \$50 million to \$400 million in deposits.

- Horizon is an AS/400-based system available as a software product or a turnkey system.

- Applications supported include:
 - Proof of Deposit
 - Demand Deposit
 - Savings, Christmas Club, CDs, and IRAs
 - Installment and Commercial Loans
 - General Ledger
 - Automated Clearing House
 - Account Reconciliation
 - Safe Deposit Box Accounting
 - Shareholder Accounting
 - ATMs
 - Report Generator
 - Word Processing
 - Asset/Liability Management System
- There are currently approximately 50 Horizon customers.

Virtuoso, acquired from C-TEC during 1990, is a cellular telephone billing and information system for IBM AS/400 and mainframe computers targeted to telephone companies.

Systematics' Career Development Center, located in Little Rock, provides training support for its software products to employees and clients.

- Courses are offered in the principles of banking, effective supervision, management, basic and advanced programming, systems design and architecture, and in-depth studies of individual Systematics' applications.

Industry Markets

One hundred percent of Systematics' 1990 revenue was derived from the banking and finance industry, including commercial banks, savings and loan institutions, credit unions, as well as mortgage and finance companies.

The majority of revenue is derived from commercial banks with deposits over \$250 million.

There are currently approximately 1,000 banks and financial institutions being served by Systematics. Customers include Republic National Bank (NY), Integra Corporation (Pittsburgh), Mitsui Manufacturers Bank (Los Angeles), Gainer Bank (IN), Peoples' Heritage Bank (ME), City National Bank (CA).

**Geographic
Markets**

Systematics derived approximately 94% of its 1990 revenue from the U.S. and 6% from international sources.

- Systematics began marketing its services internationally in 1987 and derived approximately 5% of its fiscal 1989 revenue from customers located in Europe, Asia, the Pacific, South America, and Canada.

Systematics currently serves customers in 44 states and 17 countries outside the U.S.

Systematics also has regional offices in the U.K. and Singapore that handle sales and support in those regions.

COMPANY PROFILE

SYSTEMATICS, INC.

4001 Rodney Parham Road
Little Rock, AR 72212
(501) 223-5100

John E. Steuri, Chairman and CEO
Public Corporation, OTC
Total Employees: 2,571
Total Revenue, Fiscal Year End
5/31/89: \$206,786,000

The Company

Systematics, Inc., founded in 1968, provides facilities management and disaster recovery processing services, application software products, consulting and training professional services, and turnkey systems to the banking and finance industry.

Until 1981, Systematics operated as an unconsolidated, majority-owned (75%) subsidiary of Stephens Inc., an investment banking firm also located in Little Rock. Subsequent to public offerings of Systematic's common stock made in fiscal 1982 and 1983, Stephens Inc. currently owns 48.7% of the outstanding shares.

- Systematics derived approximately \$5.1 million, \$5.2 million, and \$5.3 million in fiscal 1987, 1986, and 1985, respectively, from processing services provided to affiliates of Stephens.

In January 1986, Systematics acquired Matrix Management, Inc., a Dallas-based management consulting firm specializing in the financial services industry, for 17,263 shares of Systematics common stock.

Also in January 1986, Systematics acquired Chanin Consulting Services (CCS) of New York City (NY). CCS markets a securities lending support software product to large trust departments.

Fiscal 1989 revenue reached \$206.8 million, an increase of 13% over fiscal 1988 revenue of \$179.5 million. Net income increased 18%, from \$15.4 million in fiscal 1988 to \$18.9 million in fiscal 1989. A five-year financial summary follows:

**SYSTEMATICS, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	5/89	5/88	5/87	5/86	5/85
Revenue	\$206,786	\$179,474	\$141,577	\$122,599	\$95,875
• Percent increase from previous year	15%	26%	15%	28%	22%
Income before taxes	\$30,216	\$24,882	\$19,538	\$18,726	\$15,390
• Percent increase from previous year	21%	27%	4%	22%	50%
Net income	\$18,864	\$15,424	\$10,162	\$11,363	\$8,645
• Percent increase (decrease) from previous year	22%	52%	(11%)	31%	43%
Earnings per share	\$1.68	\$1.39	\$0.93	\$1.03	\$0.79
• Percent increase (decrease) from previous year	21%	49%	(10%)	30%	41%

Systematics management attributes the company's revenue growth over the past three years primarily to new processing agreements, scheduled price increases under existing contracts, increases in software licensing, and increased sales of data processing equipment.

- For fiscal 1989, new data processing agreements accounted for 84% of the year's increase in revenue, while software licensing and maintenance accounted for only 16% of the increase in revenue for the year.

Product development and support expenditures increased 8%, from \$16.6 million in 1988 to \$17.9 million in 1989. Education and training expenses increased from \$3.6 million in 1988 to \$3.9 million in 1989.

Systematics has pledged to spend \$75 million on research and development over the next 5 years.

Systematics is organized as follows:

- FM East is responsible for facilities management contracts for the eastern U.S.

- FM West is responsible for facilities management contracts for the western U.S.
- Software Service Marketing is responsible for marketing applications software products.
- Technical Services is responsible for the development, maintenance, and customer support of all Systematics' software.
- Human Resources provides education and training to employees and customers.
- Finance and Law handles the internal financial and legal operations of the company.
- Systematics Consulting Services, formerly Matrix Management, Inc., provides consulting services.
- The International Division markets and supports application products for customers located outside the U.S.
- The Community Banks Division markets turnkey systems to smaller banks and thrifts.

Systematics' major competitors include the following companies: EDS, Flserv, Hogan Systems, and First Financial Management.

Key Products and Services

Approximately 76% of Systematics' fiscal 1989 revenue was derived from processing services (facilities management), 11% from application software products, 4% from consulting professional services, and 9% from equipment sales and leases.

Systematics' products and services are designed exclusively for the financial industry (banks, savings institutions, credit unions, and mortgage service companies).

Systematics had 72 facilities management contracts in effect at the end of fiscal 1989, an increase of 9 contracts over fiscal 1988, and 22 over fiscal 1987's 50 active contracts.

- Facilities management contracts are generally marketed to larger banks, those with deposits ranging from \$250 million to \$10 billion or more.
- The computer hardware and data center staff are located in or near the bank.

- Such contracts usually have a term of five years and include a 99-year nonexclusive license for the client to use the software for internal processing.
- The company provides facilities management processing services from over 60 company-owned data centers.

A remote services contract, generally five years in length, is used for the company's smaller bank clients. Systematics derived approximately 4% of its fiscal 1989 revenue from services contracts, compared with 10% of revenue in fiscal 1986.

- Remote services clients may elect to purchase a non-exclusive license to continue use of Systematics' software following the original term of the remote services contract.
- Because processing is done at remote locations that service several clients, it tends to be less customized.
- Three of the company's data centers are devoted to serving the 56 currently active remote services contracts.

Systematics has developed a complete set of integrated banking and financial applications software termed Systematics Integrated Financial Software. These applications, available through facilities management/services contracts and as software products, include the following:

- On-Line Delivery Systems:
 - The Back Office
 - The Platform
 - The Branch
 - The ATM
- Accounting Systems:
 - Demand Deposits
 - Integrated Monetary Processing and Control System (IMPACS)
 - Savings/Time Deposit
 - Loans
 - Commercial Loans
 - Installment Credit
 - Real Estate Loans

- Auxiliary Accounting Systems
 - Combined Statements
 - All Items Entry Control
 - Item Reconciliation
 - Tax Reporting
 - Warehouse
 - Dealer Floor Plan
 - Dealer Reserve
 - Charge-Off
 - Loan Origination
 - Collections
- Management Systems:
 - Financial Management Systems
 - Financial Management Systems (FMS)
 - Accounts Payable
 - Asset/Liability Management System (ALMS)
 - Customer Management Systems
 - Customer Information System (CIF)
 - Profitability Analysis
 - Combined Statements
 - Information Management Systems
 - Systematics Information Management System (SIMS)
 - SMART Marketing System

Systematics also provides disaster backup and recovery services, contingency planning, and consulting services. Customers, primarily financial institutions, may subscribe to either a shell facility or a fully-equipped IBM facility, generally for a term of five years.

- Disaster backup services are marketed only to Systematics contract clients.

Systematics software products run on IBM mainframes under DOS/VSE, VM, and MVS.

- All of the applications available through Systematics' FM processing services may be purchased as individual software products or as a total integrated system.
- There are currently about 150 clients who have purchased the software for in-house use.

Turnkey systems available from Systematics include the following:

- In fiscal 1989, Systematics introduced the Systematics Automated Financial Environment (SAFE), a reworked version of Systematics' Community Banking System, designed to run on IBM's AS/400 minicomputer. There are currently four installations of the SAFE product.
- The Community Bank System, introduced in January 1987, is an IBM System 36-based multi-bank, multi-branch system for community banks with \$50 million to \$200 million in deposits.
 - The central information system supports the following applications:
 - Proof of Deposit
 - Demand Deposit
 - Savings, Christmas Club, CDs, and IRAs
 - Installment and Commercial Loans
 - General Ledger
 - Automated Clearing House
 - Account Reconciliation
 - Safe Deposit Box Accounting
 - Shareholder Accounting
 - ATMs
 - Report Generator
 - Word Processor
 - Asset/Liability Management System
 - Systematics is no longer actively marketing the System 36-based products. Systematics is attempting to move the Community Bank System's existing eight clients to SAFE.
- In June 1983, Systematics became a value-added remarketer for IBM personal computers and introduced its first microcomputer software package, ALMS™ (Asset Liability Management System).
 - ALMS provides monthly, quarterly, and long-range planning for financial management.

- ALMS is available as a software product or as a turnkey system. Modules include the following:
 - Balance Sheet Organization
 - Monthly Budget Simulation, Gap Analysis, and management reporting
 - Bond Swap Analysis
 - Futures Hedging and Trading

Systematics' Career Development Center, located in Little Rock, provides training support for its software products to employees and clients.

- Courses are offered in the principles of banking, effective supervision, management, basic and advanced programming, systems design and architecture, and in-depth studies of individual Systematics' applications.
- During fiscal 1989, 3,817 people attended 271 Center classes, including 1,960 client participants.
- Systematics spent nearly \$4 million on Center operations, not including the costs of salaries for those attending classes.

Industry Markets

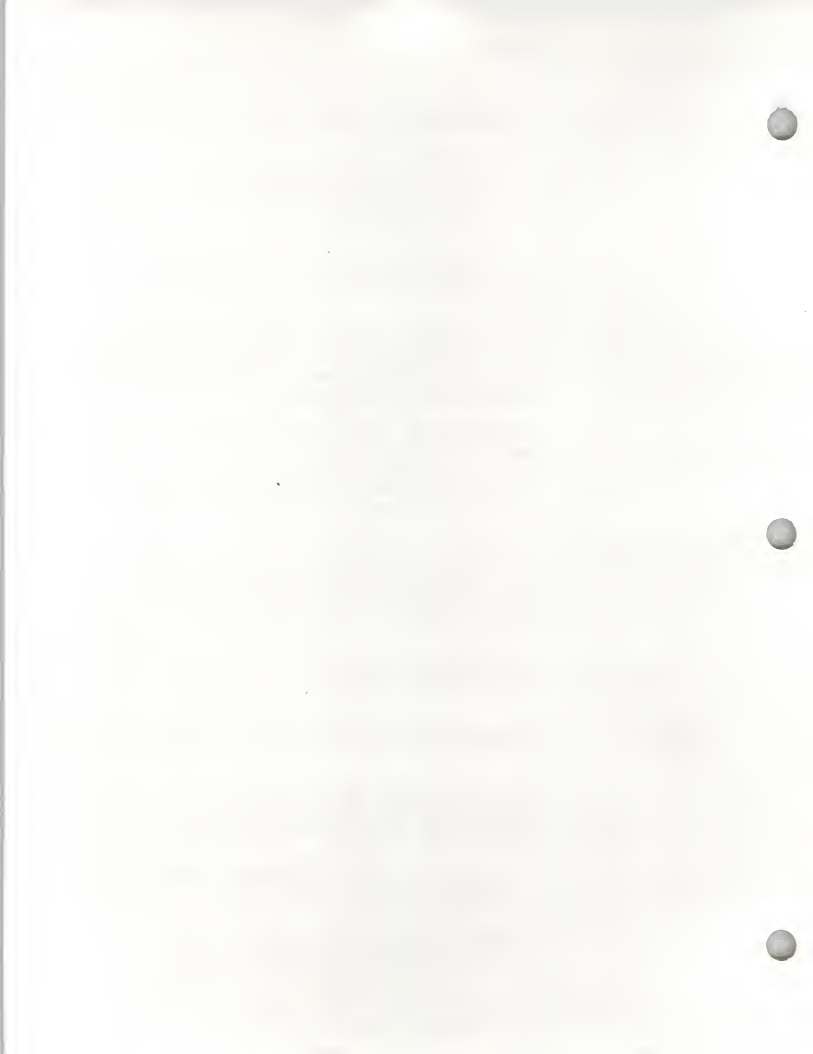
One hundred percent of Systematics' fiscal 1989 revenue was derived from the banking and finance industry, including commercial banks, thrifts, mortgage banks, and other financial institutions.

- The majority of revenue is derived from commercial banks with deposits over \$250 million.

Geographic Markets

Systematics derived approximately 95% of its fiscal 1989 revenue from the U.S.

- Systematics began marketing its services internationally in 1987 and derived approximately 5% of its fiscal 1989 revenue from customers located in Europe, Asia, the Pacific, South America and Canada.
 - Systematics has a regional office in Singapore, handling sales and support for the Pacific Rim.
 - Sales of Systematics software in the Scandinavian countries are handled by Computas, located in Oslo, Norway.



COMPANY PROFILE

SYSTEMATICS, INC.
4001 Rodney Parham Road
Little Rock, AR 72212
(501) 223-5100

Walter V. Smiley, Chairman
Raymond R. Maturi, President and CEO
Public Corporation, OTC
Total Employees: 2,092
Total Revenue, Fiscal Year End
5/31/87: \$141,577,000

THE COMPANY

- Systematics, Inc., founded in 1968, provides facilities management and disaster recovery processing services, application software products, consulting professional services, and turnkey systems to the banking and finance industry.
- Until 1981 Systematics operated as an unconsolidated, majority-owned (75%) subsidiary of Stephens Inc., an investment banking firm also located in Little Rock. Subsequent to public offerings of Systematic's common stock made in fiscal 1982 and 1983, Stephens Inc. currently owns 48.7% of the outstanding shares.
 - Systematics derived approximately \$5.1 million, \$5.2 million, and \$5.3 million in fiscal 1987, 1986, and 1985, respectively, from processing services provided to affiliates of Stephens.
- In January 1986 Systematics acquired Matrix Management, Inc., a Dallas-based management consulting firm specializing in the financial services industry, for 17,263 shares of Systematics common stock.
- Also in January 1986 Systematics acquired Chanin Consulting Services (CCS) of New York City (NY). CCS markets a securities lending support software product to large trust departments.
- Fiscal 1987 revenue reached \$141.6 million, an increase of 15% over fiscal 1986 revenue of \$122.6 million. Net income declined 11%, from \$11.4 million in fiscal 1986 to \$10.1 million in fiscal 1987. A five-year financial summary follows:

SYSTEMATICS INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

Item \ Fiscal Year	5/87	5/86	5/85	5/84	5/83
Revenue	\$ 141,577	\$ 122,599	\$ 95,875	\$ 78,712	\$ 64,398
• Percent increase from previous year	15%	28%	22%	22%	31%
Income before taxes	\$ 19,538	\$ 18,726	\$ 15,390	\$ 10,289	\$ 8,604
• Percent increase from previous year	4%	22%	50%	20%	67%
Net income	\$ 10,162	\$ 11,363	\$ 8,645	\$ 6,049	\$ 4,694
• Percent increase (decrease) from previous year	(11%)	31%	43%	29%	45%
Earnings per share	\$ 0.93	\$ 1.03	\$ 0.79	\$ 0.56	\$ 0.45
• Percent increase (decrease) from previous year	(10%)	30%	41%	24%	32%

- Systematics management attributes the company's revenue growth over the past three years primarily to new processing agreements, scheduled price increases under existing contracts, increases in software licensing, and increased sales of data processing equipment.
 - For fiscal 1987, 35% of the increase in revenue was derived from processing agreements, while software licensing and equipment sales accounted for 11% and 40%, respectively, of the remaining increase.
- Declines in net income during fiscal 1987 were attributed to the following factors:
 - As a result of increased merger and acquisition activity in the financial industry during fiscal 1987 several Systematics clients who had been acquired merged their data processing into the operations of the organizations which acquired them.
 - Software and processing sales were slower than expected during the first half of the year.
 - The company invested significantly in new business activities, including management consulting (Matrix Management, Inc.), international banking products, and an IBM System 36-based turnkey product.

- The change in tax laws had a negative effect on results for fiscal 1987, but will have a positive effect in fiscal 1988, with the company's federal tax rate going from 46% to 39%.
- System development expenditures were \$7.7 million (5.5% of revenue) in fiscal 1987, \$5.8 million (4.8% of revenue) in fiscal 1986, and \$5.2 million (5.5% of revenue) in fiscal 1985. Over the next five years, Systematics has plans to commit more than \$65 million for software research and development.
- The company continued its commitment to the education and training of clients and personnel. In fiscal 1987, these expenditures reached approximately \$3 million, as compared with \$2.4 million in fiscal 1986, and \$1.8 million in fiscal 1985. Over the next five years Systematics has plans to commit more than \$20 million for a continuing training program for both clients and staff.
- Revenue for the three months ending August 31, 1987 was \$40.4 million, a 29% increase over \$31.3 million for the same period in 1986. Net income was \$2.9 million, compared to net income of \$1.8 million for the same period a year ago. Management attributes the positive results to increased sales combined with cost controls and a lower effective tax rate.
- Systematics is organized as follows:
 - FM East is responsible for facilities management contracts for the eastern U.S.
 - FM West is responsible for facilities management contracts for the western U.S.
 - FM Central is responsible for facilities management contracts for the central U.S.
 - Remote Services handles the services contracts for remote processing services for community banks and thrifts.
 - Software Service Marketing is responsible for marketing applications software products.
 - Technical Services is responsible for the development, maintenance, and customer support of all Systematics' software.
 - Human Resources provides education and training to employees and customers.
 - Finance and Law handles the internal financial and legal operations of the company.
 - Matrix Management, Inc. provides consulting services.

SYSTEMATICS, INC.

- The International Division markets and supports application products for customers located outside the U.S.
- The Community Banks Division markets turnkey systems to smaller banks and thrifts.
- As of May 31, 1987, the company had approximately 2,092 employees segmented as follows:

Managerial	234
Technical/professional specialists	812
Operational personnel	<u>1,046</u>
	2,092

- There are currently approximately 2,300 employees.
- Major competitors by product/service area include the following:
 - Systematics' processing services competitor is Electronic Data Systems.
 - Application software competitors include the Kirchman Corporation (Florida Software Services), Hogan Systems, and Computer Associates (UCCEL).
 - Systematics' turnkey system competitor is Omni Resources, Inc., a subsidiary of The Kirchman Corporation.

KEY PRODUCTS AND SERVICES

- Approximately 74% of Systematics' fiscal 1987 revenue was derived from processing services (facilities management), 11% from application software products, 2% from consulting professional services, and 9% from equipment sales and leases. The remaining 4% of revenue was derived from turnkey systems and disaster recovery services. A three-year summary of source of revenue follows:

	<u>5/87</u>	<u>5/86</u>	<u>5/85</u>
Processing services (FM)	74%	83%	88%
Application software	11	10	9
Professional services	2	-	-
Equipment sales	9	5	-
Other	<u>4</u>	<u>2</u>	<u>3</u>
	100%	100%	100%

- The company's primary market for its products and services is the 15,000 commercial banks and 4,000 thrift institutions across the U.S.

- Facilities management processing services are provided to 56 banks and thrifts.
 - A facilities management contract is used with larger banks, generally those with deposits ranging from \$250 million to \$10 billion or more. Approximately 69% of fiscal 1987 revenue was derived from facilities management contracts, compared to 73% of revenue in fiscal 1986.
 - The computer hardware and data center staff are located in or near the bank.
 - Such contracts usually have a term of five years and include a 99-year nonexclusive license for the client to use the software for internal processing.
 - On May 31, 1987, the company had 50 facilities management contracts. Systematics currently has 56 facilities management contracts under which it performs processing.
 - Fifty of the company's data centers are devoted to processing under these contracts.
 - In August 1987, Systematics announced it had entered into FM agreements with Brenton Banks, Inc., Honolulu Federal Savings and Loan Association, and Burritt InterFinancial Bancorp. Each agreement has a term of five years and the three contracts have a combined value in excess of \$33 million.
- A remote services contract, generally five years in length, is used for the company's smaller bank clients. Systematics derived 5% of fiscal 1987 revenue from services contracts, compared to 10% of revenue in fiscal 1986.
 - Remote services clients may elect to purchase a non-exclusive license to continue use of Systematics' software following the original term of the remote services contract.
 - Because processing is done at remote locations that service several clients, it tends to be less customized.
 - One of the company's data centers is devoted to processing under these service contracts. The company currently has 44 remote services contracts.
- Systematics has developed a complete set of integrated banking and financial applications software termed Systematics Integrated Financial Software. These applications, available through facilities management/services contracts and as software products, include the following:

SYSTEMATICS, INC.

- On-Line Delivery Systems.
 - The Back Office.
 - The Platform.
 - The Branch.
 - The ATM.
- Accounting Systems.
 - Deposits.
 - Integrated Monetary Processing and Control System (IMPACS).
 - Savings/Time Deposit.
 - Loans.
 - Commercial Loans.
 - Installment Credit.
 - Real Estate Loans.
 - Auxilliary Accounting Systems.
 - Combined Statements.
 - All Items Entry Control.
 - Item Reconciliation.
 - Tax Reporting.
 - Warehouse.
 - Dealer Floor Plan.
 - Dealer Reserve.
 - Charge-Off.
 - Loan Origination.
 - Collections.
- Management Systems.
 - Financial Management Systems.
 - Financial Management Systems (FMS).
 - Accounts Payable.
 - Asset/Liability Management System (ALMS).
 - Customer Management Systems.
 - Customer Information System (CIF).
 - Profitability Analysis.
 - Combined Statements.
 - Information Management Systems.
 - Systematics Information Management System (SIMS).
 - SMART Marketing System.
- Systematics also provides disaster backup and recovery services, contingency planning, and consultation services. Customers, primarily financial institutions, may subscribe to either a shell facility or a fully-equipped IBM facility, generally for a term of five years. There are currently 55 subscribers for these services.
- Systematics software products run on IBM mainframes under DOS/VSE, VM, and MVS.

SYSTEMATICS, INC.

- All of the applications available through Systematics' FM processing services may be purchased as individual software products or as a total integrated system.
- There are currently about 150 clients who have purchased the software for in-house use.
- Turnkey systems available from Systematics include the following:
 - Community Bank System, introduced in January 1987, is an IBM System 36-based multi-bank, multi-branch system for community banks with \$50 million to \$200 million in deposits.
 - The central information system supports the following applications:
 - Proof of Deposit.
 - Demand Deposit.
 - Savings, Christmas Club, CDs, and IRAs.
 - Installment and Commercial Loans.
 - General Ledger.
 - Automated Clearing House.
 - Account Reconciliation.
 - Safe Deposit Box Accounting.
 - Shareholder Accounting.
 - ATMs.
 - Report Generator.
 - Word Processor.
 - Asset/Liability Management System.
 - There are currently five systems installed.
 - In June 1983 Systematics became a value-added remarketer for IBM personal computers and introduced its first microcomputer software package, ALMSTM (Asset Liability Management System).
 - ALMS, provides monthly, quarterly, and long-range planning for financial management.
 - ALMS is available as a software product or as a turnkey system. Modules include the following:
 - Balance Sheet Organization.
 - Monthly Budget Simulation, Gap Analysis, and Management Reporting.
 - Bond Swap Analysis.
 - Futures Hedging and Trading.
- Systematics' Career Development Center, located in Little Rock, provides training support for its software products to employees and clients.

SYSTEMATICS, INC.

- Courses are offered in the principles of banking, effective supervision, management, basic and advanced programming, systems design and architecture, and in-depth studies of individual Systematics' applications.
- During fiscal 1987, 2,658 people attended 215 Center classes, including 1,129 client personnel.
- Systematics spent nearly \$3 million on Center operations, not including the costs of salaries for those attending classes.

INDUSTRY MARKETS

- One hundred percent of Systematics' fiscal 1987 revenue was derived from the banking and finance industry, including commercial banks, thrifts, mortgage banks, and other financial institutions.
- The majority of revenue is derived from commercial banks with deposits over \$250 million.

GEOGRAPHIC MARKETS

- One hundred percent of Systematics' fiscal 1987 revenue was derived from the U.S. The company has clients in 46 states across the U.S.
- During the third quarter of fiscal 1987, Systematics entered into an agreement with CAP Financial Services, Ltd. of London, England, to serve as the exclusive distributor of Systematics' software in Europe and in parts of the Far East.

COMPUTER HARDWARE AND SOFTWARE

- Systematics operates 51 data centers in 24 states. Data centers are located in Alabama, Arizona, Arkansas (3), California (8), Connecticut, Hawaii, Idaho, Illinois, Iowa, Indiana (6), Kansas, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York (2), Ohio (3), Oklahoma (2), Pennsylvania (2), Texas (6), Vermont, and Washington (3).
- Systematics' data centers all use IBM equipment. Host computers include IBM 4381s, 4341s, 4331s, and 308Xs.
- The network supports CRTs, manned teller terminals, automated teller machines (ATMs), point-of-sale terminals, audio response units, AT&T view sets, and other banking peripheral equipment.
- The network is accessed via dial-up and leased lines.

FINANCIAL UPDATE TO PROFILE DATED NOVEMBER 1984

SYSTEMATICS, INC.
4001 Rodney Parham Road
Little Rock, AR 72212
(501) 223-5100

Walter V. Smiley, Chairman and CEO
Raymond R. Maturi, President and COO
Public Corporation, OTC
Total Employees: 1,900
Total Revenue, Fiscal Year End
5/31/85: \$95,874,800

SYSTEMATICS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	5/85	5/84	5/83	5/82	5/81
Revenue	\$ 95,875	\$ 78,712	\$ 64,398	\$ 49,308	\$ 36,335
• Percent increase from previous year	22%	22%	31%	36%	20%
Income before taxes	\$ 15,390	\$ 10,289	\$ 8,604	\$ 5,150	\$ 3,131
• Percent increase from previous year	50%	20%	67%	64%	26%
Net income	\$ 8,645	\$ 6,049	\$ 4,694	\$ 3,236	\$ 1,993
• Percent increase from previous year	43%	29%	45%	62%	50%
Earnings per share (a)	\$ 0.79	\$ 0.56	\$ 0.45	\$ 0.34	\$ 0.25
• Percent increase from previous year	41%	24%	32%	36%	56%

(a) Restated to reflect a 2-for-1 stock split effective October 21, 1983.

- In January 1985 Systematics purchased the outstanding stock of Western Data Centers, Inc., Amarillo (TX), for approximately \$3.2 million in cash and a \$410,000 note. Results of the acquired company have been included from the date of acquisition.
 - Western Data (formerly a subsidiary of First Amarillo Bancorporation, Inc.) provides remate processing services to over 50 banks and thrifts in four states (New Mexico, Colorado, Oklahoma, and Texas).
 - Western Data now operates as a subsidiary of Systematics.

SYSTEMATICS, INC.

SOURCE OF REVENUE

- Approximately 75% of Systematics' fiscal 1985 revenue was derived from facilities management processing services, 16% from remote processing services, and the remaining 9% was derived from software licenses.
- During fiscal 1985 Systematics added six new facilities management clients, bringing the total to 43 at year end. Remote processing services clients increased to 112 at year end from 59 in fiscal 1984.
- One hundred percent of Systematics' revenue is derived from the banking and finance industry in the U.S.

COMPANY HIGHLIGHT

SYSTEMATICS, INC.
4001 Rodney Parham Road
Little Rock, AR 72212
(501) 223-5100

Walter V. Smiley, Chairman and CEO
Raymond R. Maturi, President
Public Corporation, OTC
Total Employees: 1,750
Total Revenue, Fiscal Year End
5/31/84: \$78,712,000

THE COMPANY

- Systematics, Inc., founded in 1968, provides facilities management processing and professional services, applications software products, and turnkey systems to the banking and finance industry.
- Until 1981 Systematics operated as an unconsolidated, majority-owned (75%) subsidiary of Stephens Inc., an investment banking firm also located in Little Rock. Subsequent to public offerings of Systematics' common stock made in fiscal 1982 and 1983, Stephens Inc. currently owns 48.7% of the outstanding shares.
 - Systematics derived approximately \$2.8 million in fiscal 1984 and \$1.3 million in fiscal 1983 from processing services provided to affiliates of Stephens.
- Fiscal 1984 revenue reached \$78.7 million, an increase of 22% over 1983 revenue of \$64.4 million. Net income rose 29% from \$4.7 million in 1983 to \$6 million in 1984. A five-year financial summary follows:

SYSTEMATICS, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

ITEM \ FISCAL YEAR	5/84	5/83	5/82	5/81	5/80
Revenue	\$ 78,712	\$ 64,398	\$ 49,308	\$ 36,335	\$ 30,284
• Percent increase from previous year	22%	31%	36%	20%	24%
Income before taxes	\$ 10,289	\$ 8,604	\$ 5,150	\$ 3,131	\$ 2,477
• Percent increase from previous year	20%	67%	64%	26%	42%
Net income	\$ 6,049	\$ 4,694	\$ 3,236	\$ 1,993	\$ 1,327
• Percent increase from previous year	29%	45%	62%	50%	39%
Earnings per share (a)	\$ 0.56	\$ 0.45	\$ 0.34	\$ 0.25	\$ 0.16
• Percent increase from previous year	24%	32%	36%	56%	N/A

(a) Restated to reflect a 2-for-1 stock split effective October 21, 1983.

- Research and development expenditures were \$4.9 million (6% of revenue) in fiscal 1984, \$3.3 million (5% of revenue) in fiscal 1983, and \$2 million (4% of revenue) in fiscal 1982.
 - Increases in development costs resulted primarily from expenses associated with the completion of the trust accounting system and MVS versions of Systematics' other software products.
 - Systematics' management estimates development expenditures will continue to approximate at least 5% of revenue.
- The company continued its commitment to the education and training of personnel. In fiscal 1984 these expenditures reached approximately \$1.6 million, as compared with \$984,000 in fiscal 1983, and \$750,800 in fiscal 1982.
- In September 1983 Systematics acquired St. Joseph Systems, Inc. of South Bend (IN) for a purchase price of approximately \$2.5 million.
 - The assets acquired included a trust accounting software system valued at \$2.1 million, receivables, and equipment.
 - St. Joseph Systems now operates as St. Joseph Systematics, Inc. a wholly owned subsidiary of Systematics.

SYSTEMATICS, INC.

- Revenue for the three months ending August 31, 1984 was \$21.9 million, a 15% increase over the \$19 million for the same period in 1983.
 - Net income for the quarter declined 5% from \$1.6 million to \$1.5 million. In the first quarter of last year Systematics had nonrecurring revenue of \$700,000 and nonrecurring pretax profits of \$500,000, reflecting a one-time payment from a data processing client purchasing his contract. Without this item, net income would have shown an increase of 17% over last year.
- Systematics is organized into seven divisions as follows:
 - FM East is responsible for facilities management contracts for the eastern U.S.
 - FM West is responsible for facilities management contracts for the western U.S.
 - Remote Services handles the services contracts for remote processing services for community banks.
 - Software Service Marketing is responsible for marketing applications software products.
 - Technical Services is responsible for the development, maintenance, and customer support of all Systematics' software.
 - Human Resources provides education and training to employees and customers.
 - Finance and Law handles the internal financial and legal operations of the company.
- As of May 31, 1984 the company had approximately 1,750 employees segmented as follows:

Managerial	180
Technical specialists	670
Operational personnel	<u>900</u>
	1,750
- There are currently approximately 1,850 employees.
- Major competitors by product/service area include the following:
 - Systematics' processing services competitor is Electronic Data Systems.

SYSTEMATICS, INC.

- Applications software competitors include The Kirchman Corporation, Hogan Systems, and UCCEL.
- Systematics' turnkey system competitor is Omni Resources, Inc., a subsidiary of The Kirchman Corporation.

KEY PRODUCTS AND SERVICES

- Approximately 91% of Systematics' fiscal 1984 revenue was derived from processing services (facilities management) and 9% was derived from applications software.
- The company's primary market for its products and services is the 15,000 commercial banks and 4,500 thrift institutions across the U.S.
- Facilities management processing services are provided to over 500 banks and thrifts from the company's 44 data centers under one of two types of contracts.
 - A facilities management contract is used with larger banks, generally those with deposits of \$250 million or more. Approximately 79% of fiscal 1984 revenue was derived from facilities management contracts.
 - The computer hardware and data center staff are located in or near the bank.
 - Such contracts usually have a term of five years and include a 99-year nonexclusive license for the client to use the software for internal processing.
 - On May 31, 1984 the company had 39 facilities management contracts. Systematics currently has 40 facilities management contracts under which it performs processing. ✓
 - Thirty-eight of the company's data centers are devoted to processing under these contracts.
 - A services contract, usually from three to five years in length, is used for the company's smaller bank clients. Systematics derived 12% of fiscal 1984 revenue from services contracts.
 - These banks do not acquire rights to continued use of Systematic's software after the expiration of the contract.
 - Because processing is done at remote locations that service several clients, it tends to be less customized.
 - Four of the company's data centers are devoted to processing under these services contracts. The company currently has 59 services contracts. ✓

SYSTEMATICS, INC.

- During 1982 Systematics introduced resource management professional services as a variation of its facilities management processing services. These contracts are also for a term of five or more years, with Systematics providing the management, staff, and applications software necessary to operate the client's programming department, while the client retains responsibility for the computer operations in the data center. Systematics currently has three resource management contracts served by two data centers.
- Systematics has developed a complete set of integrated banking and financial applications software termed Systematics Source Systems (formerly the Family of Financial Systems). These applications, available through facilities management/services contracts and as software products, include the following:
 - Deposit Systems.
 - Proof and Transit System: distributes and balances transactions; facilitates float management; and creates cash letters, document lists, and control totals for all end points.
 - Integrated Monetary Processing and Control System (IMPACS): processes demand deposits and overdrafts plus attached savings accounts and loan accounts. It provides exacting audit and accounting controls, analytical information for financial management, and operations and customer reporting.
 - Item Reconciliation System: provides reconciliation processing and customer reports.
 - Savings/Time Deposit System: processes savings accounts, certificates of deposit, time deposit open accounts, individual retirement accounts, and club accounts.
 - Loan Systems.
 - Commercial Loans System: provides information on individual loans and reports on customers and their liabilities/relationships with their banks.
 - Dealer Floor Plan: a subsystem of the Commercial Loans System, provides collateral and inventory reporting for the inventory-type "dealer flooring" loans.
 - Installment Credit System: reports and manages consumer loans, providing various interest accrual and payment methods, and has accounting capabilities demanded by government regulatory agencies.

SYSTEMATICS, INC.

- Dealer Reserve: a subsystem of the Installment Credit System, provides accounting and reporting on indirect dealer loans.
- Real Estate Loans System: provides management of mortgage loans including GPM, ARM, VRM, wraparounds, and buydowns, as well as escrow accounting and secondary market reporting.
- Charged Off Loans System: manages and processes charged-off loans. It can operate separately or as a subsystem to the other loan systems.
- Financial Systems.
 - Financial Management System: provides a general ledger system together with responsibility center reporting, budgeting, forecasting, historical analysis, and cost allocation subsystem information.
 - Inter-System Transfer: provides a means for entering items from all the applications systems into the general ledger.
- Management Information Systems.
 - Asset/Liability Management: provides Gap analysis, budget simulation, optimization, bond swap analysis, and futures hedging.
 - Profitability Analysis: provides current and historical information for analyzing a customer, group of customers, or a product.
 - Project Control System: provides scheduling and monitoring of data processing projects.
- On-Line Systems.
 - Information Access System: allows for interapplication communications capabilities, including data entry, file maintenance, inquiry, transaction verification, report viewing, memo posting of monetary transactions, and stop/hold processing.
 - Financial Information Access System: allows communications capabilities for all batch applications. This is a menu-driven system using CICS as a teleprocessing monitor.
 - Customer Reference File System: supports automated teller machines by cross-referencing individual accounts, keeping inventory of the "money cards," and automatically reordering cards when necessary.

SYSTEMATICS, INC.

- Customer Information File System: manages customers' personal information such as name, address, census and credit data, and provides data on customer account relationships.
 - Customer Profitability Analysis System: analyzes customer base to determine which relationships are profitable and provides modeling to assist in the pricing of products and services.
- Systematics software products run on IBM mainframes under DOS/VSE and MVS.
 - All of the applications available through Systematics' FM processing services may be purchased as individual software products or as a total integrated system.
 - There are currently about 75 clients who have purchased the software for in-house use.
- In 1983 Systematics introduced TrustEase, an enhanced version of the original bank trust accounting system acquired with St. Joseph Systems. TrustEase is available to customers as a software product or as a turnkey system.
 - The software runs on Hewlett-Packard minicomputers under the MPE operating system.
 - The system performs all accounting functions for trust accounts and maintains an inventory of securities by individual account and block. Features include check writing/automatic disbursements, tax ledger information, tickets with information on employees maintaining assets, and dividend and interest accrual.
 - Report capabilities include current asset reviews, monthly cash accountings for each trust account, and summarized customer fiscal or calendar year statements.
- In June 1983 Systematics became a value-added remarketer for IBM personal computers and introduced its first microcomputer software package, ALMSTM (Asset Liability Management System).
 - ALMS, jointly developed by Systematics and the National Bank of Commerce, provides monthly, quarterly, and long-range planning for financial management.
 - ALMS is available as a software product or as a turnkey system. Modules include the following:
 - Balance Sheet Optimization.
 - Monthly Budget Simulation, Gap Analysis, and Management Reporting.

SYSTEMATICS, INC.

- Bond Swap Analysis.
 - Futures Hedging and Trading.
- Systematics' Career Development Center, located in Little Rock, provides training support for its software products to employees and clients. It also provides additional technical, banking, and managerial training for Systematics' employees.
 - During fiscal 1984, 1,784 people attended Center classes, including 637 client personnel.
 - Systematics spent over \$1.5 million on Center operations, not including the costs of salaries for those attending classes.
 - Systematics' management estimates fiscal 1984 training expenditures will exceed \$2 million.

INDUSTRY MARKETS

- One hundred percent of Systematics' fiscal 1984 revenue was derived from the banking and finance industry.
 - The majority of revenue is derived from commercial banks with deposits over \$250 million.
 - A major goal of the company during fiscal 1984 was to expand its marketing to thrift institutions. During the year Systematics signed four major thrift institutions to long-term processing and/or programming management contracts and software license agreements with eight additional thrifts.
 - Now that Systematics' software is available for MVS operating environments, the company is also targeting its products and services to the largest commercial banks and thrifts (generally with deposits over \$1 billion).

GEOGRAPHIC MARKETS

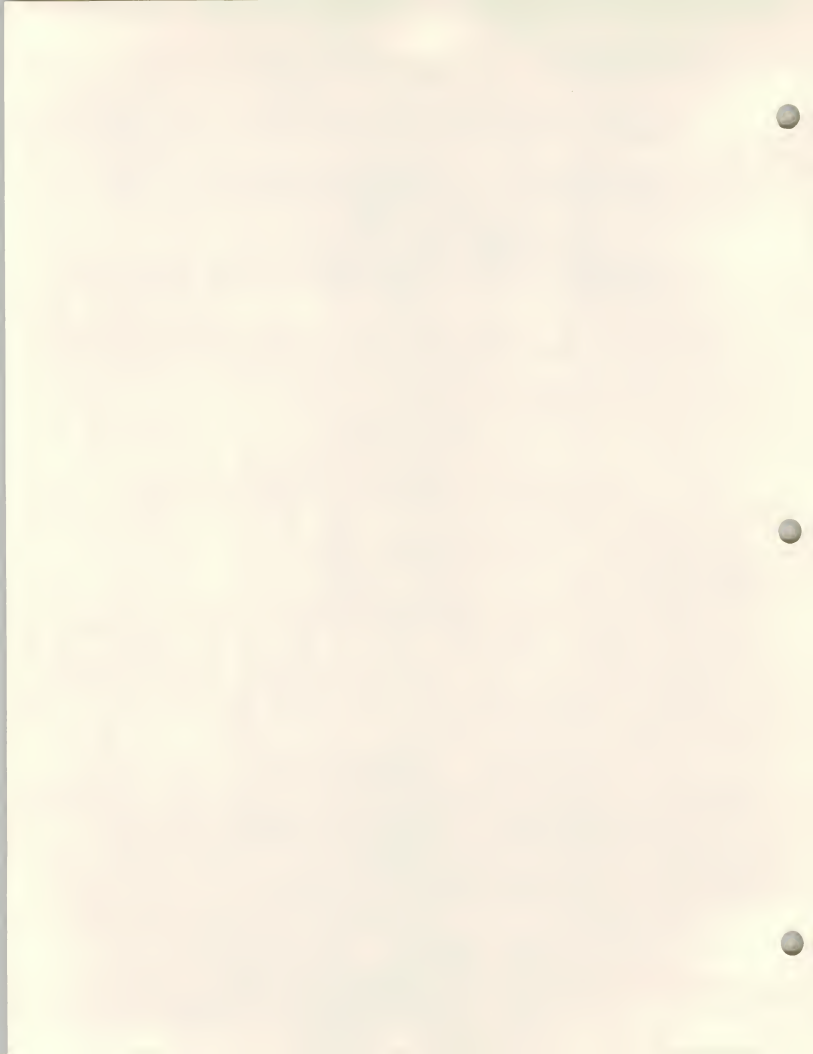
- One hundred percent of Systematics' fiscal 1984 revenue was derived from the U.S. The company has clients in 23 states across the U.S.

COMPUTER HARDWARE AND SOFTWARE

- Systematics operates 44 data centers in 23 states. Data centers are located in Alabama, Arizona, Arkansas, California, Idaho, Illinois, Indiana, Kansas, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, New Mexico, New York, Ohio, Pennsylvania, Tennessee, Texas, Utah, Vermont, Washington, and Wyoming.

SYSTEMATICS, INC.

- Systematics' data centers all use IBM equipment. Host computers include IBM 4381s, 4341s, and 4331s.
- The network supports CRTs, manned teller terminals, automated teller machines (ATMs), point-of-sale terminals, audio response units, AT&T view sets, and other banking peripheral equipment.
- The network is accessed via dial-up and leased lines.
- St. Joseph Systematics has HP minicomputers installed for product development.



FINANCIAL UPDATE TO HIGHLIGHT DATED OCTOBER 1982

SYSTEMATICS, INC.
4001 Rodney Parham Road
Little Rock, AR 72212
(501) 223-5100

Walter V. Smiley, Chairman and CEO
Raymond R. Maturi, President
Public Corporation, OTC
Total Employees: 1,621
Total Revenue, Fiscal Year End
5/31/83: \$64,398,300

SYSTEMATICS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	5/83	5/82	5/81	5/80	5/79
Revenue	\$ 64,398	\$ 49,308	\$ 36,335	\$ 30,284	\$ 24,428
. Percent increase from previous year	31%	36%	20%	24%	34%
Income before taxes	\$ 8,604	\$ 5,150	\$ 3,131	\$ 2,477	\$ 1,747
. Percent increase from previous year	67%	64%	26%	42%	42%
Net income	\$ 4,694	\$ 3,236	\$ 1,993	\$ 1,327	\$ 958
. Percent increase from previous year	45%	62%	50%	39%	43%
Earnings per share	\$ 0.90	\$ 0.68	\$ 0.49	\$ 0.32	\$ 0.23
. Percent increase from previous year	32%	39%	53%	39%	35%

SOURCE OF REVENUE

- Approximately 94% of fiscal 1983 revenue was derived from processing services (facilities management) and 6% from applications software.

COMPANY HIGHLIGHT

SYSTEMATICS, INC.
4001 Rodney Parham Road
Little Rock, AR 72212
(501) 223-5100

Walter V. Smiley, President
and Chairman
Public Corporation, OTC
Total Employees: 1,489
Total Revenue, Fiscal Year End
5/31/82: \$49,307,600

THE COMPANY

- Founded in 1968, Systematics, Inc. provides facilities management (FM) processing services to the commercial banking industry. In 1980 the company also began marketing applications software to banks.
- Until 1981 Systematics operated as an unconsolidated, majority-owned (75%) subsidiary of Stephens Inc., an investment banking firm also located in Little Rock. In August 1981 an initial public offering of 880,000 shares of Systematics common stock was made.
 - Proceeds of \$11.5 million were used to retire existing long-term debt, to repay financing for a portion of construction cost of a new headquarters facility, and for general corporate purposes, including additions to working capital, purchase of additional data processing equipment, and possible acquisitions.
 - Upon completion of this offering, Stephens Inc. owned 62% of the outstanding shares of Systematics stock.
- On October 28, 1982 the company offered an additional 440,000 shares of common stock.
 - Proceeds of \$11.6 million will be added to working capital and to finance possible acquisitions.
 - Upon completion of this second offering, Stephens Inc. owned 48.7% of the outstanding shares of Systematics stock.
- Fiscal 1982 revenue reached \$49.3 million, an increase of 36% over 1981 revenue of \$36.3 million. Net income increased 62% to \$3.2 million from \$1.99 million. A five-year financial summary follows:

SYSTEMATICS, INC.

SYSTEMATICS, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

ITEM \ FISCAL YEAR	5/82	5/81	5/80	5/79	5/78
Revenue	\$ 49,308	\$ 36,335	\$ 30,284	\$ 24,428	\$ 18,211
• Percent increase from previous year	36%	20%	24%	34%	37%
Income before taxes and extraordinary item	\$ 5,150	\$ 3,131	\$ 2,477	\$ 1,747	\$ 1,232
• Percent increase from previous year	64%	26%	42%	42%	28%
Net income	\$ 3,236	\$ 1,993	\$ 1,327	\$ 958	\$ 670
• Percent increase from previous year	62%	50%	39%	43%	38%
Earnings per share	\$ 0.68	\$ 0.49	\$ 0.32	\$ 0.23	\$ 0.17
• Percent increase from previous year	39%	53%	39%	35%	-

- In 1982, \$1.98 million (4% of revenue) was spent on research and development as compared to \$1.6 million (4.4% of revenue) in 1981. As of August 31, 1982 the company employed 88 full-time computer programmers and technical personnel in system development and support.
- The company continued its commitment to the education and training of its personnel. In fiscal 1982 these expenditures reached \$750,753 as compared with \$616,920 in 1981 and \$444,265 in 1980.
- The company has four divisions:
 - FM East is responsible for facilities management contracts for the eastern U.S.
 - FM West is responsible for facilities management contracts for the western U.S.
 - Remote Services handles the services contracts for remote processing services for community banks.
 - Software Marketing is responsible for applications software products.

SYSTEMATICS, INC.

- Systematics' 1,489 employees are segmented approximately as follows:

Managerial	156
Technical specialists	423
Operating personnel	<u>910</u>
	1,489

- Major competitors for processing services are Electronic Data Systems and National Sharedata. The company's largest competitor in the software field is the Kirchman Corporation.

KEY PRODUCTS AND SERVICES

- Approximately 96% of fiscal 1982 revenue was derived from processing services (facilities management) and 4% from applications software.
- The company's primary market for its products and services are the 14,500 commercial banks in the U.S.
- Processing services are provided to over 200 banks from the company's 41 data centers under one of two types of contracts.
 - A facilities management contract is used with larger banks, generally those with deposits of \$250 million or more.
 - The computer hardware and data center staff are located in or near the bank.
 - Such contracts usually have a term of five years and include a 99-year nonexclusive license for the client to use the software for internal processing.
 - The company has 37 facilities management contracts under which it performs processing for 38 larger banks and 173 smaller banks (including 155 banks which have subcontracts with the larger banks).
 - Thirty-six of the company's data centers are devoted to processing under these contracts.
 - A services contract, usually from three to five years in length, is used for the company's smaller bank clients.
 - These banks do not acquire rights to continued use of Systematic's software after the expiration of the contract.
 - Because processing is done at remote locations which service several clients, it tends to be less customized.

SYSTEMATICS, INC.

- The company has 59 services contracts with 68 banks.
 - Five of the company's data centers are devoted to processing under these services contracts.
- Systematics has developed a complete set of integrated banking and financial applications software termed the Family of Financial Systems. These systems, available through FM processing services and as software products, include:
 - Deposit Systems.
 - Item Processing System: distributes and balances transactions, facilitates float management, creates cash letters, document lists, and control totals for all end points.
 - Integrated Monetary Processing and Control System (IMPACS): processes demand deposits, overdrafts plus attached savings accounts and loan accounts, provides exacting audit and accounting controls, analytical information for financial management, and operations and customer reporting.
 - Accounts Reconciliation System: provides reconciliation processing and customer reports.
 - Savings/Time Deposit System: processes savings accounts, certificates of deposit, time deposit open accounts, individual retirement accounts, and club accounts.
 - Loan Systems.
 - Commercial Loans System: provides information on individual loans and reports on customers and their liabilities/relationships with their bank.
 - Dealer Floor Plan: a subsystem of the Commercial Loans System, provides collateral and inventory reporting for the inventory type "dealer flooring" loans.
 - Installment Credit System: reports and manages consumer loans, providing various interest accrual and payment methods, and has accounting capabilities demanded by government regulatory agencies.
 - Dealer Reserve: a subsystem of the Installment Credit System, provides accounting and reporting on indirect dealer loans.
 - Mortgage Loans System: provides management of mortgage loans.

SYSTEMATICS, INC.

- Charged Off Loans: manages and processes charged off loans. It can operate separately or as a subsystem to the other loan systems.
- Financial Systems.
 - Financial Management System: provides a general ledger system together with responsibility center reporting, budgeting, historical analysis, and cost allocation subsystem information.
 - Inter-System Item Transfer: provides a means for entering items from all the applications systems into the general ledger.
- In-Bank Systems.
 - Investments: provides accurate pricing, future maturity, and yield information on bonds.
 - Payroll: provides payroll accounting processing and labor distribution information.
 - Project Control System: provides scheduling and monitoring of data processing projects.
- On-Line Systems.
 - Information Access System: allows for interapplication communications capabilities including data entry, file maintenance, inquiry, transaction verification, report viewing, memo posting of monetary transactions, and stop/hold processing.
 - Financial Information Access System: allows communications capabilities for all batch applications. This is a menu-driven system using CICS as a teleprocessing monitor.
 - Customer Reference File System: supports automated teller machines by cross-referencing individual accounts, keeping inventory of the "money cards," and automatically reordering cards when necessary.
 - Customer Information File: manages customers' personal information such as name, address, census and credit data, and provides data on customer-account relationships.
- All banking services are available for on-line or batch modes and have multi-bank, multibranch capabilities.
- Major processing clients are located nationwide and range in size from approximately \$50 million to \$8 billion in total assets.

SYSTEMATICS, INC.

- Systematics software products run on IBM mainframes under the DOS/VSE operating system.
 - The software may be purchased as an integrated system or as individual applications.
 - There are currently about 27 clients who have purchased the software for in-house use.
 - All of the applications available through Systematics' FM processing services may be purchased as software products. Pricing is available upon request.

INDUSTRY MARKETS

- Substantially all of Systematics' fiscal 1982 revenue was derived from commercial banks.

GEOGRAPHIC MARKETS

- One hundred percent of Systematics' fiscal 1982 revenue was derived from the U.S.

COMPUTER HARDWARE AND SOFTWARE

- Systematics operates 41 data centers in 20 states. Data centers are located in Arizona, Arkansas, California, Idaho, Illinois, Indiana, Kansas, Louisiana, Michigan, Minnesota, Missouri, New Mexico, New York, Pennsylvania, Tennessee, Texas, Utah, Vermont, Washington, and Wyoming.
- Systematics' data centers all use IBM equipment. Host computers are typically IBM 4341s and 4331s. Over 47 systems are installed at various locations.
- The network supports CRTs, manned teller terminals, automated teller machines (ATMs), point-of-sale terminals, audio response units, AT&T view sets, and other banking peripheral equipment.
- The network is accessed via dial-up and leased lines.

COMPANY HIGHLIGHT

SYSTEMATICS, INC.
212 Center Street
Little Rock, AR 72201
(501) 372-6141

Walter V. Smiley, President and
Chairman
Private Corporation
Total Employees: 1,017
Total Revenues, Fiscal Year End
5/31/80: \$30,284,200
Non-Captive Revenues: \$29,000,000*

THE COMPANY

- Founded in 1968, Systematics, Inc. provides facilities management (FM) services to large commercial banks with up to \$900 million in assets. The company also offers banking applications software products and processing services to banks and other financial institutions.
- Systematics is an unconsolidated, majority-owned (70%) subsidiary of Stephens Inc., an investment banking firm also located in Little Rock. Captive revenues are estimated at less than 5% of FY 1980 revenues.
- Fiscal 1980 revenues rose 24% to \$30.3 million from \$24.4 million in FY 1979. Net income increased 39% to \$1.3 million from \$0.96 million. A five-year financial summary follows:

SYSTEMATICS, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ Thousands, Except Per Share Data)
(FYE 5/31)

ITEM \ FISCAL YEAR	1980	1979	1978	1977	1976
Revenues	\$30,284	\$24,428	\$18,211	\$13,335	\$ 8,891
• Percent increase from previous year	24%	34%	37%	50%	--
Income before taxes and extraordinary item	\$ 2,477	\$ 1,747	\$ 1,232	\$ 963	\$ 451
• Percent increase from previous year	42%	42%	28%	114%	--
Net income	\$ 1,327	\$ 958	\$ 670	\$ 487	\$ 266
• Percent increase from previous year	39%	43%	38%	83%	--
Earnings per share	\$ 1.28	\$ 0.94	\$ 0.67	\$ 0.49	\$ 0.27
• Percent increase from previous year	36%	40%	37%	81%	--

* Company Estimate

- Management projects revenues of approximately \$38 million for FY 1981.
- Systematics provides services through four divisions headquartered in Little Rock:
 - The Western Facilities Management Division is responsible for providing FM services to all clients in the western U.S.
 - The Eastern Facilities Management Division provides FM services to eastern U.S. clients.
 - The Services Division provides batch and remote batch processing to small banks.
 - The Software Marketing Division offers a complete set of banking applications software.
- Systematics' management prides itself on the quality of its service and its commitment to banking software. Its FY 1981 budget for R&D is \$1.7 million, which supports 50 full-time people.
- Systematics' 1,017 employees are segmented approximately as follows:

Marketing/sales	6
Software services/customer support	300
Computer operations	671
General/administrative	40
	1,017
- Major competitors to Systematics for processing services are Electronic Data Systems and National Sharedata. The company's largest competitor in the software field is Florida Software Services.

KEY PRODUCTS AND SERVICES

- One hundred percent of FY 1980 revenues were derived from FM processing contracts with commercial banks and financial institutions within the U.S.
- FM services are generally provided under long-term contracts of up to eight years' duration. The average FM contract is \$350,000-400,000 yearly.
- Systematics has developed a complete set of banking and financial integrated applications software termed the Family of Financial Systems. The company has offered the software through its FM processing services, and recently decided to market the systems separately. Systems available include:
 - Integrated Monetary Processing and Control System (IMPACS): demand deposit accounting.

- Savings: passbook, clubs, corporate savings accounting and individual retirement account processing.
- Certificates of Deposit.
- Time Deposits Open Accounting (TDOA).
- Investments: municipal, federal, industrial, public housing authority and corporate bonds; treasury bills.
- Personal Trust.
- Mortgage Loans: Federal and Government National Mortgage Association, housing and urban development and construction loans.
- Commercial Loans.
 - . Dealer Floor Plan: specialized inventory loans.
- Installment Loans: regular, single pay/balloon notes, mobile home and student loans.
 - . Installment Loan Yield Analysis.
 - . Dealer Reserve Accounting.
- Charged Off Loan System: for installment, commercial and mortgage loans.
- Combined statements.
- Credit card.
- Payroll.
- Financial Management System (FMS): automated general ledger, budget and account history, responsibility center reporting, cost allocations and historical analyses.
- Item Processing System: distribution and balancing functions.
- Information Access System (IAS).
- Inter System Item Transfer (ISIT): enters accounting and statistical data generated by an application system into the Financial Management System.
- Central Information File (CIF).
- All banking services are available for on-line or batch modes and have multibank, multibranch capability.

- The system supports teller machines, video terminals, audio response, automated teller machines and other media devices.
- Systematics' decision to enter the software market and establish the Software Marketing Division in June 1980 was based on three major factors:
 - The features, proven flexibility and operating efficiency of Systematics' software.
 - The company's ongoing investment in research and development, central maintenance, training and documentation.
 - The value of the experience gained through development, installation, operation and support of existing systems.
- The systems are written in COBOL and run on IBM 360/370 and 4300 series equipment under DOS, DOS/VS and DOS/VSE. Software from Systematics' Family of Financial Systems may be purchased individually or on a multiple basis.
 - Ongoing maintenance, enhancements, education and support are available from Systematics' central staff.
- In 1980, Systematics sold its internally developed Project Control system to the City of Phoenix. Other city governments are also showing interest in this product.
- In July 1980, Systematics began offering remote processing services to smaller banks from three data centers located in Troy (MI), Little Rock and Fayetteville (AR).

INDUSTRY MARKETS Approximately 90% of Systematics' FY 1980 revenues were derived from commercial banks and 10% from other financial institutions.

GEOGRAPHIC MARKETS

- Systematics operates 32 data centers in 16 states for its approximately 200 banking and finance clients.
 - Data centers are located in Arizona, Arkansas, California, Idaho, Illinois, Indiana, Kansas, Louisiana, Michigan, Minnesota, Missouri, Pennsylvania, Texas, Utah, Washington and Wyoming.

COMPUTER HARDWARE

- Systematics' data centers all use IBM equipment. Host computers are typically IBM 370/145s, 4331s and 4341s.

- The network supports CRTs, manned and unmanned teller terminals, cash dispensers, point-of-sale terminals, audio response units, AT&T view sets and other banking peripheral equipment.
- The network is accessed via dial-up and leased lines.

COMPANY HIGHLIGHT

SYSTEMATICS, INC.
212 Center Street
Little Rock, Arkansas 72201
(501) 372-6141

Walter Smiley, President
Private corporation
Total employees: 700
Total revenues, fiscal year
end 3/31/77: \$13,300,000

THE COMPANY

- Systematics, Inc. was founded by Walter Smiley in 1968 to provide facilities management (FM) services to commercial banks. This is still the company's targeted market area. Major competition is from Electronic Data Systems and National Sharedata.
- It is a rapidly growing company. Revenues increased 49% from \$8.9 million in FY 1976 to \$13.3 million in FY 1977, FY 1976 revenues increased 44% over FY 1975 revenues of \$6.2 million. Pre-tax earnings grew 109% between FY 1976 and FY 1977 from \$451,000 to \$963,000. FY 1975 pre-tax earnings were \$351,000.
- Management anticipates FY 1978 pre-tax earnings to reach \$1.6 million on revenues of \$18 million.
- Systematics' management prides itself on the quality of its service and its commitment to bank software.
 - The FY 78 budget for R&D is \$1.1 million and supports 52 full-time people.
 - Since 1968, the company has lost only two bank customers. The client base has grown from 65 commercial banks in 1975 to 100 in 1977. The company has only three people in sales; however, most new customers are acquired through referrals.

KEY PRODUCTS AND SERVICES

- All of Systematics' revenues derive from facilities management contracts with commercial banks in the US.
- Banking services include:
 - Central Information File
 - Integrated Monetary Processing and Control System (IMPACS)
 - Savings: passbook, clubs, corporate savings accounting, and IRAs.
 - Certificates of Deposit
 - Time Deposits Open Accounting (TDOA)

COMPANY HIGHLIGHT/SYSTEMATICS, INC.

- Investments: municipal, federal, industrial, and corporate bonds; treasury bills
 - Personal trust
 - Loans: mortgage, commercial, construction, inventory (including dealer floor plan), installment (student, mobile home, regular, balloon notes), with a charged off loan capability for all loan types.
 - Combined statements
 - Credit card: cardholder and merchant processing
 - Payroll
 - Financial Management System: automated general ledger, budgeting, historical analyses, cost allocations, and responsibility center reporting.
- All banking services are available for on-line or batch modes and have multi-bank, multi-branch capability.
 - The system supports teller machines, CRTs, audio response units, automate teller machines, and other media devices.

APPLICATIONS Specialty services with banking applications.

INDUSTRY MARKETS Commercial banks.

GEOGRAPHIC MARKETS Systematics operates 26 data centers for its 100 bank clients. The centers are distributed through the continental U.S.

COMPUTER HARDWARE AND SOFTWARE

- Systematics' operated sites are all IBM equipment based. Host computers are typically IBM System 370/135s 360/40s, and 370/145s.
- The network supports CRTs, manned and unmanned teller terminals, cash dispensers, point-of-sale terminals, audio response units, AT&T view sets, and other banking peripheral equipment. The computers are accessed by dial-up and leased lines.

FINANCIAL UPDATE TO PROFILE DATED JUNE 1984

SYSTEMS AND APPLIED SCIENCES
CORPORATION (SASC)
1577 Springhill Road
Vienna, VA 22180
(703) 790-3700

Porter L. Bankhead, Chairman and CEO
Private Corporation
Total Employees: 957
Total Revenue, Fiscal Year End
9/30/85: \$52,700,000

SASC THREE-YEAR REVENUE SUMMARY (\$ thousands)

ITEM \ FISCAL YEAR	9/85	9/84	9/83	9/82 (a)	6/81
Revenue	\$52,700	\$45,000	\$35,000	\$40,000	\$18,800
Percent increase (decrease) from previous year	17%	29%	(13%)	113%	-

(a) In 1982 SASC changed its fiscal year end from June 30 to September 30 to coincide with the fiscal year end of the federal government.

- Two major events affecting SASC have occurred since fiscal year end 1985. In April 1986, SASC split into two separate companies. One will retain the original name, but as of June 1986 the name of the second company had not been decided and no further information was available. In May 1986, SASC won a \$20 million contract to supply automated data processing to Region 8 (Montana, North Dakota, South Dakota, Wyoming, Utah, and Colorado) of the General Services Administration (GSA). The new contract is expected to add 200 people to the staff of the company retaining the original name of SASC.

- SASC's 957 employees are segmented as follows:

Professional	351
Technical staff	476
Marketing	15
General and administrative	<u>115</u>
	957

SOURCE OF REVENUE

- Approximately 90% (\$47.4 million) of SASC's fiscal 1985 revenue was derived from professional services. Ten percent of revenue (\$5.3 million) was derived from noncomputer services including technical writing and scientific instrument sales.

SYSTEMS AND APPLIED SCIENCES CORPORATION (SASC)

- SASC's fiscal 1985 revenue was derived from government and commercial industries approximately as follows:

Federal government	97%
State and local government	2
Other (commercial aerospace, computer manufacturers, and computer services companies)	<u>1</u>
	100%

- Approximately 82% of 1985 revenue was derived from the Washington, D.C. metropolitan area and 17% from across the U.S. The remaining 1% was related to a contract with the People's Republic of China.

COMPANY HIGHLIGHT

**SYSTEMS AND APPLIED SCIENCES
CORPORATION**
1577 Springhill Road
Vienna, VA 22180
(703) 790-3700

Porter L. Bankhead, President
Private Corporation
Total Employees: 679
Total Revenue, Fiscal Year End
9/30/83: \$35,000,000

THE COMPANY

- Systems and Applied Sciences Corporation (SASC) was incorporated in 1973 as Washington Data Processing Inc. to provide custom programming and applications software for NASA and the National Earth Satellite Service. Reincorporated in 1975 under its present name, SASC now provides systems engineering, custom software development, facilities management, and custom turn-key systems; and it develops and manufactures electro-optical instruments.
- SASC is minority owned and is certified as an 8(a) company by the U.S. Small Business Administration.
- SASC's fiscal 1983 revenue was approximately \$35 million. A three-year summary of revenue follows:

SASC
THREE-YEAR REVENUE SUMMARY
(\$ thousands)

ITEM	FISCAL YEAR		
	9/83	9/82(a)	6/81
Revenue	\$35,000	\$40,000	\$18,800

- (a) In 1982 SASC changed its fiscal year end from June 30 to September 30 to coincide with the fiscal year end of the federal government.
- Revenue of \$40 million reported for fiscal 1982 actually represents the results of SASC for the 15-month period beginning July 1, 1981 and ending September 30, 1982.
 - SASC management estimates that revenue for the 12-month period ending September 30, 1982 was approximately \$35 million and that fiscal 1983 revenue remained the same.
 - The company believes the lack of revenue growth is attributable to the major relocation of the company's operations from Riverdale (MD) to Vienna (VA).

SYSTEMS AND APPLIED SCIENCES CORPORATION

- SASC is organized into six operating divisions as follows:
 - The Systems Engineering Division (SED) provides scientific and engineering analyses for tracking/navigation systems and sensor tracking. SED provides system development/acquisition programs through front-end studies, verification and validation, and systems engineering.
 - The Information Systems Division (ISD) provides the Department of Defense (DOD), civil agencies, and commercial clients with custom turnkey systems, management and business analyses, systems and applications programming support, and facilities management services.
 - The Scientific Systems Division (SSD) provides government and industry with software development and custom turnkey systems for atmospheric and earth sciences, with emphasis on environmental remote sensing.
 - West Coast Operations: General Systems Division (GSD) specializes in custom software and turnkey system development for the government and aerospace/defense industry in the areas of satellite communication and telemetry data processing, satellite navigation test and evaluation, and on-line integrated navigation systems.
 - West Coast Operations: Instrument Division (ID) designs and manufactures custom electro-optical instruments for government and commercial clients.
 - The Command, Control, Communication, and Intelligence (C³I) Division supports the DOD and defense-related commercial contractors in the system design and development of C³I tactical systems.

- SASC's 679 employees are segmented as follows:

Professional	250
Technical staff	340
Marketing	9
General and administrative	<u>80</u>
	679

- SASC's major competitors include Computer Sciences Corporation, Scientific Applications, Inc., Martin Marietta, and Litton.

KEY PRODUCTS AND SERVICES

- Approximately 90% (\$31.5 million) of SASC's fiscal 1983 revenue was derived from professional services. Ten percent of revenue (\$3.5 million) was derived from noncomputer services including technical writing and scientific instrument sales.

SYSTEMS AND APPLIED SCIENCES CORPORATION

- Forty-five percent of revenue (\$15.8 million) was derived from software development and consulting services.
- Approximately 40% (\$14 million) was derived from custom turnkey systems.
- Five percent of revenue (\$1.7 million) was derived from facilities management.
- SASC personnel are experienced in all phases of the software system life cycle including the following:
 - Systems engineering.
 - Feasibility analysis.
 - Requirements definition.
 - Functional design.
 - Detailed design.
 - Communications engineering.
 - Integrated logistics support.
 - Systems integration.
 - Systems testing.
 - Maintenance and operation.
 - Verification and validation.
 - Configuration management.
 - Quality assurance.
 - Reliability and maintainability.
- SASC's experience encompasses the following families of computers: IBM System 1, Series 340, 360, 370, and 303X; Amdahl; CDC 3000, 6000, CYBER, and STAR; XDS Sigma; Univac 1100 Series; Honeywell 6000; DEC PDP 11, VAX-11/780; MODCOMP IV; HP 3000 and 6000; Data General NOVA and ECLIPSE; and Perkin-Elmer 8/32.
- The company has extensive experience in the following languages: Ada, APL, ATLAS, BASIC, COBOL, FORTRAN, JOVIAL, PL/I, and various assembly and command languages.
- SASC has developed software systems for such applications as interactive graphics, command and control, data base management, telemetry processing, sensor data acquisition, and communications systems for aerospace, defense, business, and environmental analysis. Specific contract examples include:
 - The Communications System Control Element (CSCE) Program. SASC, through the C³I Division, is involved in a large multi-year system design development, procurement, and integration program conducted for the Department of Defense.
 - The CSCE is a prototype, software-first system development. As part of the TRI-TAC switched tactical communications program, it will provide real-time command-and-control

management over battlefield communications and information to the network planning function.

- CSCE will be field-tested with the hardware, software, and data provided by SASC and is scheduled to be operable in the post-1985 timeframe.
- Stored Telemetry Processing System. SASC has developed and delivered an interactive color graphics system to support the telemetry processing requirements of the Defense Meteorological Satellite Program. This system will provide data acquisition, data base management, and user-oriented, interactive color graphics for analysis of stored telemetry housekeeping data from Block 5D-1 and 5D-2 spacecraft. The system development was being completed on a turnkey basis, where SASC provided the computer hardware (Data General M600), and associated systems engineering services.
- TIROS Operational Vertical Sounder. SASC has developed a software system that interprets sounding data to generate data products describing atmospheric structure. The system uses scientific and computing techniques in reducing atmospheric soundings to produce timely and accurate temperature and humidity profiles. SASC designed, developed, integrated, and tested the TIROS-N software system.
- Nimbus Observations Processing System. SASC has developed a telemetry processing system to support the Nimbus-7 satellite program. SASC's software is used to calibrate, analyze, and produce data products for the Nimbus-7 spacecraft instrument package, which includes the coastal zone color scanner, temperature humidity infrared radiometer, earth radiation budget sensor, and scanning multichannel microwave radiometer. SASC developed the unified trajectory dynamics-geographic registration subsystem that supports all sensor data location requirements. This system has been implemented on MODCOMP IV, CDC 3300, and IBM 360 computers.
- Micro Data Logger. SASC has developed a microcomputer data acquisition system to support Goddard Space Flight Center requirements for capturing high-rate data from the NASA Communications System (NASCOM). The system is designed to support a data rate of one megabit per second. The system is based entirely on an Intel 8085 single-board computer and is designed to accommodate two telemetry channels at 80 khz each. The system synchronizes, reformats, time tags, labels, and stores the resultant data. SASC has developed diagnostic software to support development of the computer interfacing NASCOM to the data capture tape recorders.
- Image Processing Software. SASC has extensive experience in digital image processing technology involving interactive system development and algorithm development for feature extraction, multispectral classification, and radiometric and geometric correction. Project examples include:

SYSTEMS AND APPLIED SCIENCES CORPORATION

- Satellite image data product generation subsystems for Nimbus-7 imaging sensor processing.
- Image data communications software development for transmission of TIROS-N sounding data between an IBM 360 computer facility and the Harris/6-based VISSR Image Registration and Gridding System (VIRGS).
- System engineering studies for Landsat-D ground system throughput and life cycle cost analysis.
- Systems analysis for converting the minicomputer version of the Video Image Communication and Retrieval (VICAR) system from the PDP/11-45 to the VAX/11-780.
- SASC is presently designing the Image Manipulation System (IMS), a single-user interactive image analysis system for a SEL/32-55 minicomputer supporting a GENISCO GCT-3000 interactive image display terminal.
- Optimum Path Aircraft Routing System (OPARS). SASC has developed the global aircraft route structure, aircraft performance, and global meteorological data bases, the programs to maintain and update these data bases, and the interface routines which allow the OPARS Flight Planner Subsystem to properly utilize these data bases when calculating a minimum fuel flight plan for U.S. Navy aircraft from remote sites around the world.
- SASC is engaged in several verification, validation, and system engineering efforts as follows:
 - FAA Verification and Validation Program. SASC is performing the verification and validation (V&V) of the Air Traffic Control (ATC) system automation segment Advanced Computer System Program. The automation segment of the ATC system assists air traffic controllers by performing multiple-source radar data processing, aircraft flight data processing, and computing for controller display functions. SASC is addressing the three phases comprising the initial V&V program effort: definition of operational requirements, analysis of mission and system requirements, and development of system specifications. SASC is successively refining the ATC system automation segment computer replacement program specifications and has produced analysis of the applicable state of the art in software engineering, reliability, maintainability, testing, and evaluation.
 - Next Generation Weather Radar (NEXRAD). SASC is assisting the Joint System Program Office of the Departments of Commerce, Defense, and Transportation in requirements analysis and computer processor sizing for the NEXRAD program. SASC is determining the functions to be performed by the NEXRAD processor and is estimating

software and associated hardware requirements. SASC is developing an analytical model for estimating performance characteristics of alternative systems. Subtasks of this project include establishing human-machine interface requirements, I/O requirements, development of interface control documentation, and establishment of software standards applicable to NEXRAD.

- EF-111A Automatic Test System. SASC is implementing a V&V program for the EF-111A automatic test equipment (ATE) system for the U.S. Air Force. The program involves monitoring the development of automatic test equipment software using the ATLAS language.
- Inertial Upper Stage. SASC is assisting a major aerospace systems contractor by providing systems engineering support in the verification and validation (V&V) of the operational flight software, the V&V simulator, and the checkout station software.
- Prototype Miniature Air Launched Segment (PMALS). SASC is assisting a major aerospace systems contractor by providing support for command and control system development and airborne software development for PMALS. Project tasks require the development of plans for computer program development, configuration management, and the acquisition and evaluation of computer hardware and support software. Additional tasks include development of support equipment software and mission operation center software requirements and design specifications, external interface specifications, and design of the internal data base.
- B-52 G/H WST Verification and Validation Program. SASC is performing V&V for the B-52 G/H Weapon System Trainer (WST). The objective of this V&V effort is to ensure that the computer program is properly developed in accordance with specifications, that it performs the intended function satisfactorily in the mission environment, and that it does not perform unintended functions. The WST uses Perkin-Elmer 8/32 minicomputers and associated peripherals. The most critical areas of the V&V effort involve the integration of the B-52 OAS and Air Launched Cruise Missile software into the simulator environment.
- Engineering analyses have been performed by SASC in support of ballistic missile defense, earth satellite command and control, telemetry processing, meteorology and earth resources, computer architecture, avionics, and electronic warfare programs.
- Ballistic Missile Defense Network Architecture. SASC has analyzed computer network architectures for ballistic missile defense radar and missile control. This effort involved developing a preliminary conceptual design of a star network architecture and evaluating its real-time performance characteristics for standard attack scenarios.

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- State-of-the-Art Telemetry Survey. SASC has performed an assessment of the state-of-the-art of telemetry processing for the USAF Satellite Control Facility (SCF). This effort encompassed analysis of the SCF current and projected requirements, and the evolving state-of-the-art in computer and network architectures and telemetry processing languages.
- Electronic Warfare Architecture Analysis. SASC is performing engineering analyses of components of Electronic Warfare (EW) systems for the EW master plan for ASD/XR. These analyses augment the plan with current data and trend information concerning EW processors. A systems approach is being used, combining hardware, firmware, and software in postulated EW environments. Alternative central, federated, and distributed system configurations are being rated against strict detection, throughput, and accuracy requirements. Testability, flexibility, and resource-sharing capacity are being analyzed.
- Simulation Survey. SASC assessed the status and utility of network simulations available to the Air Force Avionics Laboratory (AFAL). This analysis consisted of an evaluation of AFAL requirements and research of available, applicable simulation modes. SASC identified, evaluated, and rated three candidate simulations for AFAL use.
- SASC provides personnel and expertise to manage and support client computer facilities. Functions include computer operations, systems and software contract programming and conversion, production control, full systems generation, and engineering management.
- NASA/GSFC Management Systems Office Support. SASC is providing systems and applications programming support to the Management Systems Office (MSO) at Goddard Space Flight Center (GSFC). This support includes full System Generation (SYSGEN), troubleshooting hardware/software problems, providing user support services, developing system documentation, and conducting feasibility studies. The applications programming support is provided for the design, development, and enhancement of MSO applications software systems. These systems include Personnel System, Payroll, Basic Accounting System, and Automated Management Information System.
- NASA/LaRC Business Data Systems Division Facilities Management. SASC provided computer facilities management support to the NASA/Langley Research Center (LaRC) Business Data Systems Division. The project included computer operations, input/output dispatch functions, tape library services data conversion, and production control. Work was performed on a CDC Omega 480-II operating under OS/MVS JES3.
- Scout Mission Support. SASC is providing senior engineering management capabilities to the NASA Langley Research Center's Mission Support Office at Vandenberg AFB (VAFB), California, with responsi-

bility for Scout launch vehicle program coordination at the Western Test Range (WTR).

- Project tasks, which include arranging for Range instrumentation support and build-up and checkout of the launch vehicle, provide the overall management of facilities for NASA Scout launches at VAFB.
- SASC represents the Scout Project Office (SPO) in all Scout operations at VAFB including: documenting and negotiating for Host Base support; assuring that Range support requirements (telemetry, tracking, communication) are documented and submitted in a timely manner; accomplishing scheduling of required Range support; providing a single contact point at VAFB for NASA Scout users; and providing liaison with the Air Force Western Space and Missile Center (WSMC) for DOD Scout users.
- SASC supports and coordinates SPO efforts at VAFB through space and facilities management and Launch Services Contractor monitoring, daily status and problem reporting, and liaison to SPO.
- Other SASC Scout contract efforts include material and services acquisition from governmental (through J. F. Kennedy Space Center) and non-governmental sources, management of the Scout VAFB safety program, and fiscal services.
- MEPCOM/SSS Operations and Systems Support. SASC provided operations and systems programming and software programming support services to the Military Enlistment Processing Command (MEPCOM) and the Selective Service System (SSS).
 - The data processing requirements of both organizations are fulfilled at the MEPCOM/SSS Joint Computer Center at the Great Lakes Naval Training Center in Great Lakes (IL).
 - The center contains an IBM 370/165-II mainframe, an IBM OS/MVS operating system and utilities, a CICS/VS telecommunications interface processor, and a SYSTEM 200/80 data base management system. The system also contains the Time Sharing Option (TSO) software utility. Provisions have been made to tie 73 UNIVAC minicomputers into the main IBM network.
 - In the area of operations support, SASC was responsible for production control; a tape library; and three shifts per day, six days per week production operations.
 - Systems programming support included systems generation, utility systems loading and maintenance, programming for

SYSTEMS AND APPLIED SCIENCES CORPORATION

special products, and training JCC systems programmers. Other software programming services included development of programming to include coding, testing, documentation, debugging, and implementation.

INDUSTRY MARKETS

- SASC's fiscal 1983 revenue was derived approximately as follows:

Federal government	85%
State and local government	2
Other (commercial aerospace, computer manufacturers, and computer services companies)	<u>13</u>
	100%

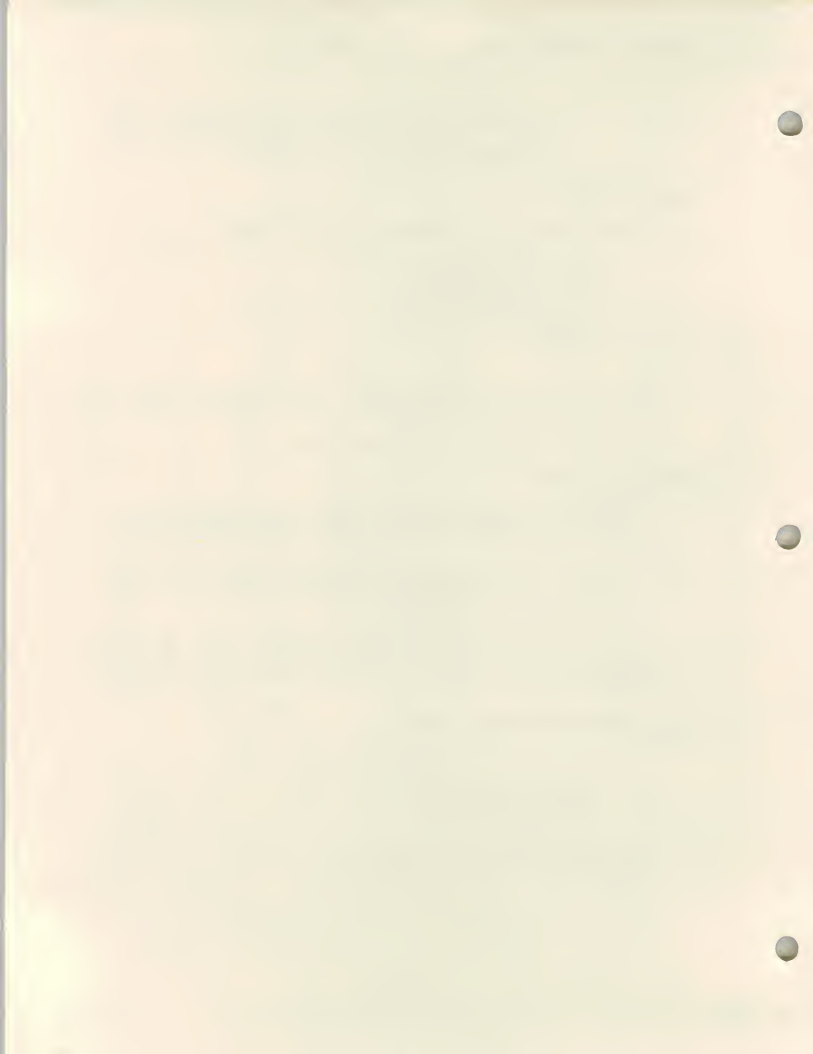
- Major government clients include the U.S. Navy, U.S. Air Force, NASA, the Department of Defense, and the Department of Commerce.
- Major commercial clients include Boeing and IBM.

GEOGRAPHIC MARKETS

- One hundred percent of SASC's fiscal 1983 revenue was derived from the U.S. Approximately 80% of revenue was derived from the Washington, D.C. metropolitan area and the remaining 20% was derived from across the U.S.
- In addition to corporate headquarters in Vienna, SASC maintains four offices in the greater Washington, D.C. metropolitan area: Annapolis, Hyattsville, and Rockville (MD); and Washington, D.C.
- Other SASC offices are located in Huntsville (AL); Sierra Vista (AZ); Anaheim, Monterey, and Palo Alto (CA); Atlanta; Chicago; Indianapolis; Lexington; Eatontown (NJ); Cleveland and Dayton (OH); Hampton (VA); and Seattle (WA).

COMPUTER HARDWARE AND SOFTWARE

- SASC has the following computers installed at its headquarters:
 - 1 DEC VAX-11/780, VMS.
 - 1 DEC VAX-11/730, VMS.
 - 1 Data General MV 8000.
- SASC has microcomputers manufactured by Apple, Tandy, and Northstar installed at various locations across the U.S.
- SASC also uses several timesharing services for certain development projects.



COMPANY HIGHLIGHT

**SYSTEMS AND APPLIED SCIENCES
CORPORATION**
6811 Kenilworth Avenue
Riverdale, MD 20737
(301) 699-5400

Porter L. Bankhead, President
Private Corporation
Total Employees: 786
Total Revenue, Fiscal Year
End 6/30/81: \$18,800,000

PRINCIPAL BUSINESS

- Systems and Applied Sciences Corporation (SASC) was incorporated in 1973 as Washington Data Processing Inc. to provide custom programming and applications software for NASA and the National Earth Satellite Service.
- Reincorporated in 1975 under its present name, SASC offers systems engineering, custom software design, facilities management, custom turnkey systems, and manufactures electro-optical instruments.
- SASC is minority owned and is certified as an 8(a) company by the U.S. Small Business Administration.

FINANCIALS

- SASC's fiscal 1981 revenue was \$18.8 million, an 83% increase over 1980's estimate of \$10.3 million. The company has achieved similar growth rates in prior years and claims it is profitable.

DIVISIONS/SUBSIDIARIES

- Systems Engineering Division provides scientific and engineering analyses including requirements analysis and verification and validation.
- Scientific Systems Division provides software development and custom turnkey systems for space, atmospheric, and earth sciences projects, with emphasis on environmental remote sensing.
- Information Systems Division designs data base management systems, provides management and business analysis, facilities management, and custom turnkey systems for non-aerospace companies.
- General Systems Division duplicates the services of the above divisions, but provides them for clients in Southern California.
- Instrument Division custom designs and manufactures electro-optical instruments.

SYSTEMS AND APPLIED SCIENCES CORPORATION

- Division Level Data Entry Device Program has been created to support an extensive program to supply turnkey minicomputer systems for the Army.

EMPLOYEES

Professional	276
Technical Staff	435
Marketing	6
General and Administrative	<u>69</u>
	786

SOURCES OF REVENUE

Professional services		90%
Software development and consulting	(45%)	
Custom turnkey systems	(40%)	
Facilities management	(5%)	
Instruments and technical writing		<u>10%</u>
		100%

PRODUCTS AND SERVICES

- SASC specializes in systems and application software development engineering analysis and verification/validation for aerospace and military projects.
 - Software developed includes:
 - Meteorology/oceanography remote sensing data analysis and modeling.
 - Cloud tracking/navigation applications.
 - Satellite tracking data analysis.
 - Telemetry systems.
 - SASC has performed engineering analyses, supporting projects in the areas of ballistic missiles, earth satellites, computer architectures, telemetry processing, meteorology and electronic warfare.
 - Typical projects include:
 - Telemetry processing software development and operation of ground system for Nimbus satellite program.
 - Development and maintenance of data bases for global aircraft route structure, aircraft performance, and global meteorological data with interface software for the U.S. Navy.
 - Development of computer models for meteorological applications, wind tunnel aerodynamics, and space instrumentation for NASA.

SYSTEMS AND APPLIED SCIENCES CORPORATION

- Engineering analysis of computer network architectures for ballistic missile radar and control.
- Assessment of state-of-the-art telemetry processing for U.S. Air Force Satellite Control Facility.
- Independent verification and validation of test equipment software for Air Force ER-111A fighter program.
- For non-defense government agencies and business sectors, SASC provides consulting and software design. Projects include:
 - Analysis, design, and implementation of a bibliographic data base management system which monitors the disposition of documents and provides interactive or batch search and retrieval.
 - For the Federal Highway Administration, redesigning systems for the analysis and prediction of urban traffic patterns.
 - For the Environmental Protection Agency, designing budget tracking and data base retrieval systems using interactive color graphics.
- Since 1977, SASC has supplied custom designed turnkey systems, the first of which was a ground system for the TIROS N satellite. Current projects include:
 - A contract with the U.S. Army to supply 688 turnkey systems based on IBM Series I hardware. SASC is ruggedizing the hardware for the military environment and installing custom software. The systems will support supply, maintenance, and personnel administrative functions.
 - For the Defense Meteorological Program, SASC is providing turnkey systems for storage telemetry processing. These are based on Data General M600 minicomputers.
- SASC provides facilities management for government installations including NASA Langley Research Center and the Air Force Data Processing Center in the Pentagon.

INDUSTRY MARKETS

Federal Government	89%
State and Local Government	1
Commercial Aerospace	5
Computer Services Companies	<u>5</u>
	100%

- Major clients include U.S. Army, U.S. Air Force, NASA, Boeing Aerospace, IBM, Department of Energy, and Department of Commerce.

SYSTEMS AND APPLIED SCIENCES CORPORATION

GEOGRAPHIC MARKETS

Washington DC area	80%
Other U.S. locations	20%

- SASC is headquartered in Riverdale (MD) and maintains offices in Lexington (MA), Hampton (VA), Huntsville (AL), Seattle (WA), Palo Alto (CA), Monterey (CA), Anaheim (CA), Sierra Vista (AZ), Chicago (IL), Belleville (IL), Indianapolis (IN), Dayton/Columbus (OH), Cleveland (OH), and Detroit (MI).

COMPUTER HARDWARE AND SOFTWARE

I DEC VAX 11/780, VMS.

COMPANY PROFILE

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

Great Valley Corporate Center
Four Country View Road
Malvern, PA 19355
(215) 647-5930

Michael J. Emmi, Chairman, President,
and CEO
Public Corporation, NASDAQ
Total Employees: 1,050 (9/91)
Total Revenue, Fiscal Year End
9/30/91: \$65,366,000

The Company

Systems & Computer Technology Corporation (SCT), founded in 1968, provides systems operations, associated support services, and applications software products to government agencies, educational institutions, and utility companies.

In March 1991, SCT acquired two applications software companies--Mentor Information Systems Inc. of Lexington (KY) and Digital Systems Inc. (DSI) of Columbia (SC)--from Philadelphia Suburban Corporation for approximately \$3.5 million in cash. These acquired firms now operate as wholly owned subsidiaries of SCT.

SCT is currently organized into five separate business units as follows:

- Information Resource Management (IRM), based in Malvern (PA), provides systems operations and professional services to higher education and government through its OnSite program.
- Software and Technology Services (STS), based in Malvern (PA), develops, licenses, and supports SCT's applications software for higher education and government clients. This unit's principal offering is the BANNER™ series of products.
- Moore Governmental Systems, based in Baton Rouge (LA), provides applications software and professional services to state, local, and municipal governments. This unit's primary product is Monitor.
- Mentor Information Systems, Inc., based in Lexington (KY), develops, markets, and supports administrative software for local government jurisdictions and non-profit organizations. Primary products include PSAS and the SPECTRUM Series.

- DSI Utility Systems, based in Columbia (SC), provides customer information and billing software for utility companies, electric cooperatives, and municipal utilities. This unit's primary product is REACT.

Fiscal 1991 revenue was \$65.4 million, a 34% increase over fiscal 1990 revenue of \$48.9 million.

- Net losses of \$349,000, compared to net income of \$848,000 for fiscal 1990, were primarily attributed to a one-time charge of \$5.1 million associated with a change in the method of accounting for license fee revenues and net operating loss carryforwards of \$1.7 million.
- A five-year financial summary follows:

**SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	9/91	9/90	9/89	9/88	9/87
Revenue	\$65,366	\$48,869	\$44,480	\$37,594	\$42,037
· Percent increase (decrease) from previous year	34%	10%	(a)	(11%)	(a)
Income (loss) before taxes	\$5,159	\$1,080	\$4,867	\$(3,331)	\$(1,460)
· Percent increase (decrease) from previous year	378%	(78%)	246%	(128%)	94%
Net income (loss)	\$(349)	\$848	\$4,867	\$(3,480)	\$100
· Percent increase (decrease) from previous year	(b)(c)	(b)	(b)	*	101%
Earnings (loss) per share	\$0.03	\$0.07	\$0.39	\$(0.26)	\$0.01
· Percent increase (decrease) from previous year	(143%)	(82%)	250%	*	101%

* Percent change exceeds 1,000%

(a) Includes approximately \$1.9 million in fiscal 1989 and \$4.9 million (less a \$1 million reserve) in fiscal 1987, as a settlement of an insurance claim with former company officers.

(b) Includes net operating loss carryforwards of \$1.7 million in fiscal 1991, \$200,000 in fiscal 1990, and \$1.9 million in fiscal 1989.

(c) Includes a \$5.1 million one-time charge due to a change in the method of accounting for license fee revenues.

SCT management attributes the company's financial results to the following:

- License fees, commissions, and software installation services increased 110% during fiscal 1991, primarily due to the acquisition of Mentor and DSI as well as continued demand for the BANNER Series of administrative software.
- IRM's OnSite service revenues increased only 1% during fiscal 1991, primarily as a result of recessionary government spending restrictions. Renewals of existing service contracts were strong in fiscal 1991--SCT retained 90% of the contract value of contracts subject to renewal (compared with 71% in fiscal 1990).
- Expenses rose 26%, from \$47.8 million to \$60.2 million, due to: inclusion of expenses for Moore, Mentor, and DSI; acceleration of amortization of certain capitalized software; increases in development costs of non-capitalized software; and other costs due to increasing volume of sales.

Revenue for the three months ending December 31, 1991 reached \$19.8 million, a 34% increase over \$13.1 million for the same period in 1990. Net income rose 32%, from \$376,000 to \$1,219,000.

Of SCT's 1,050 employees, approximately 200 are resident at the company's corporate offices, 55 at Moore, 50 at DSI, 80 at Mentor, with the remainder located throughout the U.S. and Puerto Rico, principally at client sites.

Current SCT competitors, by product/service area, include:

- Systems operations: PRC, Computer Sciences Corporation, Electronic Data Systems, and in-house data processing departments
- Software products: American Management Systems, Dun & Bradstreet Software Services, Oracle Corporation, and Integral Systems, Inc.

Key Products and Services

Approximately 51% of SCT's fiscal 1991 revenue was derived from systems operations services and 46% from applications software product licenses, commissions, and software installation services. The remaining 3% was from interest and other sources.

A three-year source of revenue summary, as provided by SCT, follows:

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
 (\$ millions)

ITEM	FISCAL YEAR					
	9/91		9/90		9/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Systems operations	\$33.0	51%	32.7	67%	\$30.5	69%
Software license fees, commissions, and installation	30.4	46%	14.5	30%	10.4	23%
Insurance settlement	—	—	—	—	1.9	4%
Interest and other	2.0	3%	1.7	3%	1.6	4%
TOTAL	\$65.4	100%	\$48.9	100%	\$44.4	100%

Information Resources Management (IRM):

IRM provides systems outsourcing services including planning, management, staffing, procurement, development, and operations capabilities for its clients' information resources--the data processing center, management information systems, office automation systems, training, and telecommunications systems.

- During 1991, IRM worked to implement a new product strategy for its OnSite program in which IRM seeks to develop outsourcing partnerships with clients to handle their systems operations.
- IRM now bundles software applications, hardware, and a Total Quality Management (TQM) methodology with its traditional facilities management services to provide clients with a complete solution to their computing needs.
- SCT developed the TQM methodology to be used as a tool for increasing client productivity by applying a standard approach to administration systems in order to easily identify opportunities for streamlining and downsizing client systems.

OnSite contracts typically cover a three- to seven-year period, with an option to renew. Many contracts provide services for a fixed fee.

IRM also provides custom applications software development services for government and education. An OnSite development team assumes full responsibility for the software development

project, including the feasibility study, design, coding, testing, and implementation, using tested methodologies for project management, software engineering, and quality assurance, such as automated project control, structured techniques, and process checkpoints.

In June 1991, IRM signed its largest contract ever with The George Washington University, a five-year, \$42 million deal.

Software and Technology Services (STS):

STS's primary product line is its BANNER™ series, although it still sells and supports a number of other packages.

The BANNER™ Series, introduced in September 1987, is SCT's administrative information management system for colleges, universities, and government jurisdictions.

- Revenue from the BANNER Series of products represented approximately 28% (\$18.3 million) of total fiscal 1991 revenue. STS's client base for the BANNER series has been increasing at a rate close to 50% per year.
- The BANNER line incorporates the ORACLE relational data base management system and SQL. The product is portable over many platforms, including DEC, IBM, AT&T, Sun Microsystems, Sequent, NCR, Data General, Hewlett-Packard, and other UNIX-based systems.
- During 1991, STS also announced the availability of BANNER software for VAX/ULTRIX and RISC/ULTRIX platforms, DEC's implementations of RISC-based hardware running the UNIX operating system.
- BANNER modules range in price from \$30,000 to \$250,000 and include the following:
 - The BANNER Student System for higher education, released in December 1987, provides a range of administrative functions, from recruiting and registration to class schedules, records, and billing.
 - The BANNER Finance System for higher education and government, released in March 1989, provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing, and budgeting.

- The BANNER Alumni System, released in March 1989, provides administrative support for fund-raising and development programs for colleges and universities.
- The BANNER Human Resources System for higher education and government, released in March 1990, supports a range of human resource administration functions, including budgeting, staffing, applicant processing, EEO reporting, W-2 reporting, assignment processing, benefits administration, and payroll processing.
- The BANNER Financial Aid System for the higher education market, released in September 1990, manages financial aid programs and includes such functions as tracking, budgeting, needs analysis and packaging.
- Development of BANNER applications for local government and utilities is the responsibility of STS. BANNER government products will be marketed by Moore and BANNER utilities products will be marketed by DSI.
- IntelliQuest™, released in November 1991, is a natural language query system that allows BANNER clients to access information from their administrative data base using plain English. IntelliQuest uses reasoning-based technology from Natural Language Inc.
- SCT is a value-added reseller of Oracle data base products and derives commission revenue on ORACLE licenses. SCT also has established marketing relationships for its BANNER series with DEC, AT&T, Sun, Data General, Hewlett-Packard, NCR, and Sequent.

The SYMMETRY™ Series, introduced in February 1987, addresses the student, financial, human resource, and alumni administrative information needs of higher education, and the financial and human resource information requirements of government jurisdictions.

- The products operate in the IBM mainframe environment, using the SUPRA™ relational data base management system from Cincom Systems.
- SYMMETRY-ISIS, the Integrated Student Information System, covers such administrative functions as registration, course catalogs, class schedules, and student billing.

- SYMMETRY-IFIS, the Integrated Financial Information System, includes financial operations, accounts payable, and budgeting.
- SYMMETRY-HRIS, the Human Resources Information System, maintains personnel, time sheet, job classification, budget and control, and payroll information.

The 4D Series of software products for higher education institutions runs on IBM and compatible mainframes using Computer Associates' IDMS/R relational data base management system. Products include:

- ISIS-4D, integrated student information system
- FIMS-4D, financial information management system

SCT provides additional administrative information systems as follows:

- A student information system under the ADABAS data management system
- A VSAM Finance System
- PELL+ is a microcomputer-based system that enables educational institutions to access and exchange data with the U.S. Department of Education's computerized Pell Grant Electronic Data Exchange Program for financial aid processing.

Moore Governmental Systems:

The Monitor Series (formerly the Integrated Financial Management System) was acquired with the Moore Companies in 1990. The series includes a family of modular software products targeted to state, local, and municipal jurisdictions.

- Monitor runs on DEC VAX, Unisys A-Series, NCR, IBM 370 and AS/400 systems and includes the following optional modules:
 - Financial management
 - Budget preparation
 - Investment management
 - Utility billing/customer information
 - Payroll processing
 - Human resources management
 - Check reconciliation

- Purchasing
 - Fixed assets
 - Stores inventory
 - Accounts receivable
 - Delinquent prosecution/collections
 - Local income tax
- Moore has licensed and installed more than 600 systems at more than 100 sites in 40 U.S. states. Clients include cities, counties, state agencies, utility authorities, school boards, colleges, and non-profit organizations.

Moore also licenses and supports SCT's BANNER Series products for government, including finance and human resources systems.

Moore has value-added reseller relationships with NCR, DEC, and Unisys. Moore is also a member of the Unisys National Business Alliance program.

DSI Utility Systems:

The REACT product line, introduced in 1976, was designed specifically for the utilities marketplace. The software runs on DEC VAX computers and is used to collect, manage, and report information for all types of utilities, including electric, water, gas, sewer, and solid waste.

- The core of the REACT family of systems is a customer information system for billing and account management that clients may customize through the purchase of modularly integrated component systems (some are specifically designed for different types of utilities).
- Additional modules include:
 - Service order management
 - Cash remittance workstation
 - Deposit management
 - Bad debt management
 - Rate analysis
 - Meter management
 - Pole or hydrant inventory

DSI also offers IntelliReader, a field information collection system that uses a hand-held data collection device for functions such as meter reading. In addition, DSI can provide process and distribution control software that interfaces with its customer information system.

DSI also markets the Monitor Customer Information System for utilities developed by Moore. The product operates on DEC VAX, Unisys A Series, and NCR systems.

SCT (through its STS unit) is developing a new BANNER Utilities System based on ORACLE and SQL that will operate on a range of hardware platforms. Availability is scheduled for late 1992.

DSI has more than 115 clients in the U.S., Canada, and the Caribbean, including utility companies, municipal utilities, and rural electric cooperatives.

Mentor Information Systems:

Mentor markets two integrated product families--the Public Sector Application Systems (PSAS, nicknamed "pizzazz") and the SPECTRUM Series--to local governments and not-for-profit organizations. Mentor systems have been installed in more than 1,200 organizations in all 50 states.

PSAS includes a range of administrative systems that operate on IBM AS/400 and System/36 computers. These systems include:

- Budgeting/Accounting
- Payroll/Personnel
- Utility Customer Accounting
- Fixed Assets Control
- Accounts Receivable
- Inventory Control
- Business Licenses & Fees
- Records Indexing
- Voter Registration
- Police Records Management
- Traffic Citation and Accident Information
- Jail Management
- Computer-Aided Dispatching

Mentor is developing a document imaging product for government that will work with the Records Indexing System of PSAS to automate county land records, such as deeds, titles and mortgages.

Mentor's SPECTRUM Series applications are fourth-generation, open systems that operate on a wide range of computers, from single-user PCs through Novell networks and midrange minicomputers, including UNIX-based systems.

- SPECTRUM Series applications include accounting, payroll, utility billing, asset management, materials management, licenses

and business taxes, property taxes, cash receipts, purchasing, and public safety systems.

In October 1991, Mentor and IBM signed a major contract with the Office of the Clerk of Jefferson County (KY) to implement records indexing and document imaging.

SCT (through its STS unit) is developing a new BANNER Courts Management System based on ORACLE and SQL that will operate on a range of hardware platforms. Availability is scheduled for late 1992.

Industry Markets

SCT's fiscal 1991 revenue was derived from educational institutions, utilities, and government. Approximately 60% came from higher education, 38% from government, and 2% from utilities.

The markets for SCT's products and services include:

- Colleges, universities, and other educational institutions, including proprietary schools
- City, county, and state government, the federal government, and federal agencies
- Educational, trade, and business associations
- Public and private utilities

Geographic Markets

Approximately 95% of SCT's fiscal 1991 revenue was derived from the U.S. and the remainder from international sources. SCT now has BANNER clients in Canada, New Zealand, and the South Pacific.

SCT maintains regional offices in Irvine (CA), Rockville (MD), Hato Rey (Puerto Rico), Lexington (KY), Columbia (SC), and Baton Rouge (LA).

COMPANY PROFILE

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

Great Valley Corporate Center
Four Country View Road
Malvern, PA 19355
(215) 647-5930

Michael J. Emmi, Chairman, President,
and CEO
Public Corporation, NASDAQ
Total Employees: 750
Total Revenue, Fiscal Year End
9/30/90: \$48,869,000

The Company

Systems & Computer Technology Corporation (SCT), founded in 1968, provides systems operations (OnSite) and associated support services and application software products to government agencies and educational institutions.

During fiscal 1990, SCT worked to create a new image, marketing plan, and sales strategy for its systems operations (Information Resource Management) services, emphasizing the importance of people and service.

- Renewal of existing services contracts continued to be strong, but closings of contracts with new clients were below expectations.
- SCT's services business was given a new name--OnSite--and a marketing strategy that positions these services as "the computing management alternative" for higher education and local government.

In July 1990, SCT acquired the Moore Companies (Moore Government Systems, Inc. and Moore Services, Inc.) of Baton Rouge (LA) for cash and stock valued at approximately \$8 million.

- Moore provides application software and professional services to state, local, and municipal governments.
- Moore had approximately 50 employees at the time of the acquisition and revenue of \$5.4 million for the fiscal year ending March 31, 1990.
- Moore now operates as a wholly owned subsidiary of SCT.

Fiscal 1990 revenue was \$48.9 million, a 10% increase over fiscal 1989 revenue of \$44.5 million. Net income was \$848,000, compared to net income of \$4.9 million for fiscal 1989, which

includes utilization of net operating loss carryforwards of \$1.9 million. A five-year financial summary follows:

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

ITEM	FISCAL YEAR				
	9/90	9/89	9/88	9/87	9/86
Revenue	\$48,869	\$44,480	\$37,594	\$42,037	\$41,523
• Percent increase (decrease) from previous year	10%	18%	(11%)	1%	(12%)
Income (loss) before taxes	\$1,080	\$4,867	\$(3,331)	\$(1,460)	\$(23,377)
• Percent increase (decrease) from previous year	(78%)	246%	(128%)	94%	*
Net income (loss)	\$848	\$4,867	\$(3,480)	\$100	\$(14,810)
• Percent increase (decrease) from previous year	(83%)	240%	*	101%	*
Earnings (loss) per share	\$0.07	\$0.39	\$(0.26)	\$0.01	\$(1.08)
• Percent increase (decrease) from previous year	(82%)	250%	*	101%	*

* Percent change exceeds 1,000%

- (a) Includes approximately \$1.9 million in fiscal 1989 and \$4.9 million (less a \$1 million reserve) in fiscal 1987, as a settlement of an insurance claim with former company officers..
- (b) Includes a \$15.4 million provision for the settlement of the class action and other litigation and related expenses.
- (c) Includes net operating loss carryforwards of \$200,000 in fiscal 1990 and \$1.9 million in fiscal 1989.

SCT management attributes the company's financial results to the following:

- OnSite service revenues increased 7% during fiscal 1990 primarily as a result of new contracts signed in late fiscal 1989. While renewals of existing service contracts were not as strong as in fiscal 1989, SCT still retained 71% of the contract value of contracts subject to renewal in fiscal 1990 (compared with 88% in fiscal 1989).

- License fees, commissions, and software installation services increased 39% during fiscal 1990 primarily due to the increasing demand for the BANNER Series of administrative software. BANNER runs on the ORACLE data base, for which SCT is a value-added reseller and derives commission revenue on ORACLE licenses.
- In September 1990, SCT released the BANNER Financial Aid system, which had a significant impact on license fee revenue (24 licenses were recorded).
- Also contributing to the growth was revenue generated by Moore's application software and services in July through September.
- Expenses rose 21%, from \$39.6 million to \$47.8 million due to increases in reserves to provide for potential delinquent accounts of \$646,000, the inclusion of Moore's expenses for July through September 1990 of \$1.5 million, and direct cost growth associated with service revenue and higher costs for sales, marketing, and product development incurred in anticipation of increased business levels.

Revenue for the three months ending December 31, 1990 reached \$13.8 million, a 19% increase over \$11.6 million for the same period in 1989. Net income rose 32%, from \$719,000 to \$946,000.

Recent marketing agreements announced by SCT include the following:

- In November 1990, SCT announced an agreement with DEC to jointly market SCT's BANNER Series product line on DEC computers as part of DEC's Cooperative Marketing Program. To date, more than half of SCT's BANNER licenses are on DEC systems.
- In April 1990, SCT announced an agreement with AT&T Computer Systems to market SCT's BANNER Series product line with AT&T's System 7000 Series computers to colleges and universities.
- SCT also has established marketing relationships with Sun, Data General, Hewlett-Packard, NCR, and Sequent.

Of SCT's 750 employees, approximately 200 are resident at the company's corporate offices and 550 are resident at various locations throughout the U.S. and Puerto Rico, principally at client sites.

Current SCT competitors, by product/service area, include:

- Systems operations: Planning Research Corporation, Computer Sciences Corporation, Electronic Data Systems, and in-house data processing departments.
- Software products: American Management Systems, Dun & Bradstreet Software Services, Management and Integral Systems, Inc.

Key Products and Services

Approximately 67% of SCT's fiscal 1990 revenue was derived from systems operations services and 30% from application software product licenses, commissions, and software installation services. The remaining 3% was from interest and other sources. A three-year source of revenue summary, as provided by SCT, follows:

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)

ITEM	FISCAL YEAR					
	9/90		9/89		9/88	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Systems operations	\$32.7	67%	\$30.5	69%	\$29.2	78%
Software license fees, commissions, and installation	14.5	30%	10.4	23%	6.8	18%
Insurance settlement	--	--	1.9	4%	--	--
Interest and other	1.7	3%	1.6	4%	1.6	4%
TOTAL	\$48.9	100%	\$44.4	100%	\$37.6	100%

OnSite Systems Operations:

Through its Information Resource Management (IRM) Division, SCT provides planning, management, staffing, and operating capabilities for its clients' information resources--the data processing center, management information systems, office automation systems, and telecommunications systems.

- SCT personnel are located at a client's site to manage and/or staff any combination of these functions. Responsibilities can include data center operations, administrative systems

development, budgeting control, long-term planning, user liaisons, training, hardware procurement, technical and operations support, data center design and implementation, and integrated communications services.

- OnSite contracts typically cover a three-to-five-year period, with an option to renew.

SCT also provides custom applications software development services for government and education. An on-site development team assumes full responsibility for the software development project, including the feasibility study, design, coding, testing, and implementation, using tested methodologies for project management, software engineering, and quality assurance, such as automated project control, structured techniques, and process checkpoints.

Software Products:

The BANNER™ Series, introduced in September 1987, is SCT's administrative information management system for colleges, universities, and government jurisdictions. Revenue from the BANNER Series of products represented approximately 23% (\$11.2 million) of total fiscal 1990 revenue.

- BANNER incorporates the ORACLE relational data base management system and SQL. The product runs on DEC VAX, IBM RS/6000, ST&T System 7000, and Sun SPARCserver computers, using the ORACLE^R relational data base management system and SQL.
- BANNER modules range in price from \$30,000 to \$250,000 and include the following:
 - The BANNER Student System for higher education, released in December 1987, provides a range of administrative functions, from recruiting and registration to class schedules, records, and billing.
 - The BANNER Finance System for higher education and government, released in March 1989, provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing, and budgeting.
 - The BANNER Alumni System, released in March 1989, provides administrative support for fund-raising and development programs for colleges and universities.

- The BANNER Human Resources System for higher education and government, released in March 1990, supports a range of human resource administration functions, including budget preparation and monitoring, position control and staffing, applicant processing, EEO reporting, W-2 reporting, assignment processing, benefits administration, and payroll processing.
- The BANNER Financial Aid System for the higher education market, released in September 1990, manages financial aid programs and includes such functions as tracking, budgeting, needs analysis and packaging.
- SCT is also developing a BANNER system for courts administration, with availability scheduled for 1991.
- More than 200 BANNER systems have been licensed by educational institutions nationwide. SCT also licensed its first BANNER system for government during the quarter ending December 31, 1990.

IntelliQuest™, introduced in November 1990, is a natural language query system that allows BANNER clients to access information from their administrative data base using plain English. IntelliQuest uses reasoning-based technology from Natural Language Inc. and works with all five BANNER products.

The SYMMETRY™ Series, introduced in February 1987, addresses the student, financial, human resource, and alumni administrative information needs of higher education, and the financial and human resource information requirements of government jurisdictions.

- The products operate in the IBM mainframe environment, using the SUPRA™ relational data base management system from Cincom Systems, and range in price from \$45,000 to \$150,000.
- SYMMETRY-ISIS, the Integrated Student Information System, covers such administrative functions as registration, course catalog, class schedules, and student billing.
- SYMMETRY-IFIS, the Integrated Financial Information System, includes financial operations, accounts payable, and budgeting.
- SYMMETRY-HRIS, the Human Resources Information System, maintains personnel, time sheet, and payroll

information for employees as well as job classification, budget, and control information for human resources management.

- SYMMETRY-ADD, the Alumni & Donor Development System, maintains a data base of alumni, corporations, foundations, donors, prospects, and other fund-raising sources and allows the user to create targeted mailings to prospects based on giving history, affiliations, and personal interest.

The 4D Series of software products for higher education institutions runs on IBM and compatible mainframes using Computer Associates' IDMS/R relational data base management system.

- ISIS (Integrated Student Information System)-4D, introduced in 1988, tracks a range of integrated applicant and student administrative functions, such as recruiting, admissions, academic history and transcript processing, registration, catalog and course scheduling, grade reporting, financial aid, fee assessment and collection, student housing, and faculty assignments. ISIS-4D is installed at six universities, including five that assisted SCT in the development of the system.
- SCT is currently developing FIMS-4D, a financial information management system.

SCT provides additional administrative information systems as follows:

- A student information system under the ADABAS data management system.
- A VSAM Finance System
- A Civil Court Information System.
- A Criminal Court Information System.
- PELL+ is a microcomputer-based system that enables educational institutions to access and exchange data with the U.S. Department of Education's computerized Pell Grant Electronic Data Exchange Program for financial aid processing.

The Integrated Financial Management System, acquired with the Moore Companies in 1990, is a family of modular software products targeted to state, local, and municipal jurisdictions.

- The software runs on DEC VAX, Unisys A-Series, NCR, IBM 370 and AS/400 systems.
- Modules are available for:
 - Financial management
 - Budget preparation
 - Investment management
 - Utility billing/customer information
 - Payroll processing
 - Human resources management
 - Check reconciliation
 - Purchasing
 - Fixed assets
 - Stores inventory
 - Accounts receivable
 - Delinquent prosecution/collections
 - Local income tax
- Moore has licensed and installed more than 600 systems at more than 100 sites in 40 U.S. states. Clients include cities, counties, state agencies, utility authorities, school boards, colleges, and non-profit organizations.
- Moore has value-added reseller relationships with NCR, DEC, and Unisys. Moore is also a member of the Unisys National Business Alliance program.

Industry Markets

SCT's fiscal 1990 revenue was derived from educational institutions and government.

The markets for SCT's products and services include:

- Colleges, universities, and other educational institutions, including proprietary schools.
- City, county, and state government, the federal government, and federal agencies.
- Educational, trade, and business associations.

Geographic Markets

One hundred percent of SCT's fiscal 1990 revenue was derived from the U.S. and Puerto Rico.

SCT maintains regional offices in Irvine (CA), Rockville (MD), and Hato Rey (Puerto Rico).

COMPANY PROFILE

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

Great Valley Corporate Center
4 Country View Road
Malvern, PA 19355
(215) 647-5930

Michael J. Emmi, Chairman and CEO
Public Corporation, OTC
Total Employees: 759
Total Revenue, Fiscal Year End
9/30/87: \$42,037,000

The Company

Systems & Computer Technology Corporation (SCT), founded in 1968, provides application software products and systems integration professional services, including custom software development, telecommunication consulting, information resources, and facilities management, to government agencies and educational institutions.

Fiscal 1987 revenue reached \$42 million, a 1% increase over fiscal 1986 revenue of \$41.5 million. Net income for the year was \$100,000, compared with net losses of \$14.8 million for fiscal 1986. A five-year financial summary follows:

**SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	9/87	9/86	9/85	9/84	9/83
Revenue	\$42,037	\$41,523	\$47,368	\$46,411	\$42,249
• Percent increase (decrease) from previous year	1%	(12%)	2%	10%	43%
Income (loss) before taxes	\$(1,460)	\$(23,377)	\$(264)	\$7,450	\$13,712
• Percent increase (decrease) from previous year	94%	*	(104%)	(46%)	82%
Net income (loss)	\$100	\$(14,810)	\$456	\$4,441	\$7,201
• Percent increase (decrease) from previous year	101%	*	(90%)	(38%)	94%
Earnings (loss) per share	\$0.01	\$(1.08)	\$0.03	\$0.33	\$0.54
• Percent increase (decrease) from previous year	101%	*	(91%)	(39%)	69%

* Percent change exceeds 1,000%

SCT management attributes fiscal 1987 net income to a cash settlement of approximately \$4.9 million resulting from an agreement between SCT and its former directors' and officers' liability insurance carrier.

- Losses in fiscal 1986 were attributed to the impact of \$15.5 million in lawsuit settlements and lower revenues resulting from client concerns about such litigation. All litigation issues against SCT were resolved in September 1986.

Revenue for the three months ending December 31, 1987 were \$9.7 million, a 4% decrease from \$10.1 million for the same period in 1986. Net losses for the period were \$586,000 compared to net losses of \$467,000 in for the same period a year ago.

- Results were attributed to the phaseout of several Information Resource Management contracts, partially offset by increased revenue from software licenses.

SCT is currently organized into two operating divisions as follows:

- The Information Resource Management (IRM) division provides systems integration services, including management and staffing operations for the information resources (computing, office automation, telecommunications) of educational institutions and governments. This division also includes SCT's custom software development and technical consulting services.
- The Software and Technology Services division incorporates SCT's packaged application software products and telecommunications consulting services for education and government.

As of September 30, 1987, SCT employed 759 persons. Currently SCT has 838 employees.

Current SCT competitors, by product/service area, include:

- Professional services: Planning Research Corporation, Computer Sciences Corporation, Electronic Data Systems, and in-house data processing departments.
- Software products: American Management Systems, Management Science America, and Integral Systems, Inc.

Key Products and Services

Approximately 81% of SCT's fiscal 1987 revenue was derived from professional services and 5% was from application software products. The remaining 14% was from interest and other sources. A three-year source of revenue summary, as provided by SCT, follows:

**SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	9/87		9/86		9/87	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Professional services	\$34.2	81%	\$37.8	91%	\$42.3	89%
Software license fees	1.8	4%	1.1	3%	2.3	5%
Commissions	0.2	1%	-	-	-	-
Insurance settlement	3.9	9%	-	-	-	-
Interest, primarily on short-term investments	1.6	4%	2.7	6%	2.8	6%
Other revenues	0.3	1%	-	-	-	-
TOTAL	\$42.0	100%	\$41.6	100%	\$47.4	100%

SCT provides a range of professional services to educational institutions and local governments.

Under Information Resource Management (IRM) contracts, SCT provides planning, management, staffing, and operating capabilities for its clients' information resources--the data processing center, management information systems, office automation systems, and telecommunications systems.

- SCT personnel are located at a client's site to manage and/or staff any combination of these functions. Responsibilities can include data center operations, administrative systems development, budgeting control, long-term planning, user liaisons, training, hardware procurement, technical and operations support, data center design and implementation, and integrated communications services.
- IRM contracts typically cover a three-to-five-year period, with an option to renew. As of September 30, 1987, SCT had 35

long-term contracts in effect for management and staffing services, including 18 in higher education and 17 in government.

- Some of the highlights of SCT's IRM business in fiscal 1987 include the following:
 - Allen County (IN), signed a six-year contract with SCT in managing and staffing of the data processing department.
 - The Wharton School of the University of Pennsylvania chose SCT for project management and technical support in the planning, direction, and control of the school's data processing operation.
 - San Juan Hospital (PR) signed a contract for the management and staffing of its computing and administrative functions.
 - Vasquez Hospital (PR) signed a three-year contract for SCT to provide and manage a turnkey admissions, billing, and collections system.
 - The following clients renewed their long-term IRM agreements with SCT in fiscal 1987: Temple University, Houston Community College System, Seattle University, Manhattan College, Tuskegee University, Riverside (CA) Community College District, City of Lincoln (NE), City of Kalamazoo (MI), San Diego Community College District, Washtenaw County (MI), Puerto Rico Treasury Department, and City of San Juan Health Department
 - Other IRM clients as of September 1987 include: Associated Builders and Contractors, Association of Independent Colleges and Schools, Beaver County (PA), Butte County (CA), California Institute of Technology, Charleston County (SC), Cuyahoga Community College (OH), Delaware County Community College, Genesee Community College (NY), Harvard University Business School, Health Care Financing Administration, Invesco, Inc., Lake County (IN), New Hampshire College, New Jersey Institute of Technology, Northampton County (PA), Peoria County (IL), Siskiyou County (CA), and South College.
- SCT also provides custom applications software development services for government and education. An on-site

development team assumes full responsibility for the software development project, including the feasibility study, design, coding, testing, and implementation, using tested methodologies for project management, software engineering, and quality assurance, such as automated project control, structured techniques, and process check points.

SCT provides packaged software and telecommunications planning and implementation to higher education and government through the Software and Technology Services division.

- SCT's application software products automate the administrative functions of education and government to help control costs, increase productivity and improve the quality of services, and to provide decision support information for executives and administrators. SCT's administrative information management software products include the following:
 - The BANNER™ Series, introduced in September 1987, is designed for colleges, universities, and government jurisdictions. The product runs on DEC VAX and IBM mainframe computers, using the ORACLE^R relational data base management system and range in price from \$30,000 to \$250,000.
 - The BANNER Student System for higher education provides a range of administrative functions, from recruiting and registration, to class schedules, records, and billing.
 - The BANNER Finance System for higher education and government, provides financial data and management information in the areas of fund accounting, accounts payable, cost accounting, purchasing, and budgeting.
 - The BANNER Alumni/Donor System provides administrative support for fund-raising and development programs for colleges and universities.
 - A BANNER Human Resources System for education and government is currently under development.
- Currently, there are 18 BANNER Series products licensed worldwide.
- The SYMMETRY™ Series, introduced in February 1987, addresses the student, financial, human resource, and alumni

administrative information needs of higher education, and the financial and human resource information requirements of government jurisdictions.

- The products operate in the IBM mainframe environment, using the SUPRA™ relational data base management system from Cincom Systems and range in price from \$45,000 to \$150,000.
- SYMMETRY-ISIS, the Integrated Student Information System, covers such administrative functions as registration, course catalog, class schedules, and student billing.
- SYMMETRY-IFIS, the Integrated Financial Information System, includes financial operations, accounts payable, and budgeting.
- SYMMETRY-HRIS, the Human Resources Information System, maintains personnel, time sheet, and payroll information for employees as well as job classification, budget, and control information for human resources management.
- SYMMETRY-ADD, the Alumni & Donor Development System, maintains a data base of alumni, corporations, foundations, donors, prospects, and other fund-raising sources and allows the user to create targeted mailings to prospects based on giving history, affiliations, and personal interest.
- Currently, there are 11 SYMMETRY Series products licensed world wide.
- SCT provides additional administrative information systems for other database environments as follows:
 - Student and financial information systems for higher education institutions using the IDMS/R relational database management systems from Cullinet Software.
 - A student information system under the ADABAS data management system.
 - Honeywell DM-IV administrative information systems for higher education and government.

- SCT also provides microcomputer-based application software products:
 - PCES™ is a student information system for smaller colleges, universities, and private career schools.
 - PELL+ is a system that enables educational institutions to access and exchange data with the U.S. Department of Education's computerized Pell Grant Electronic Data Exchange Program for financial aid processing.
- Software highlights for fiscal 1987 include:
 - The University of Hartford, Central Michigan University, Tuskegee University, and Santa Clara University signed contracts for SYMMETRY.
 - The West Virginia Network for Educational Telecomputing licensed the BANNER Student System for its 16 institutions.
 - The University of Southwestern Louisiana, Michigan State University, and the University of Northern Colorado signed contracts for IDMS/R student system.
 - The University of Maine System contracted with SCT for its ADABAS student system.

Industry Markets

Approximately 60% of SCT's fiscal 1987 revenue was derived from educational institutions, and 40% was from government.

The markets for SCT's products and services include:

- Colleges, universities, and other educational institutions, including proprietary schools.
- State and local government, the federal government, and federal agencies.
- Educational, trade, and business associations.

Geographic Markets

One hundred percent of SCT's fiscal 1987 revenue was derived from the U.S. and Puerto Rico.

SCT maintains regional offices in Irvine (CA), Rockville (MD), and Hato Rey (Puerto Rico).

**Computer
Hardware**

SCT maintains an IBM 4381 Model 2 mainframe and a DEC MicroVAX at its headquarters for software research and development.



COMPANY PROFILE

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

Great Valley Corporate Center
4 Country View Road
Malvern, PA 19355
(215) 647-5930

Michael J. Emmi, Chairman,
President, and CEO
Public Corporation, OTC
Total Employees: 897
Total Revenue, Fiscal Year End
9/30/85: \$47,368,000

THE COMPANY

- Systems & Computer Technology Corporation (SCT), founded in 1968, provides professional services, information resources and facilities management, systems integration services, custom software development, consulting services, and application software products for the government, educational institutions, associations, and private industry.
- Fiscal 1985 revenue reached \$47.4 million, a 2% increase over fiscal 1984 revenue of \$46.4 million. Net income fell to \$456,000 from \$4.4 million, primarily because of disproportionate expense growth incurred in anticipation of new revenue that was not achieved, and because of legal and accounting costs associated with a revenue restatement and related litigation. A five-year financial summary follows:

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

FISCAL YEAR ITEM	9/85	9/84 (a)	9/83 (a)	9/82	9/81
Revenue	\$ 47,368	\$ 46,411	\$ 42,249	\$ 29,487	\$ 19,482
Percent increase from previous year	2%	10%	43%	51%	20%
Income before taxes	\$ (264)	\$ 7,450	\$ 13,712	\$ 7,540	\$ 3,335
Percent increase (decrease) from previous year	(104%)	(46%)	82%	126%	44%
Net income	\$ 456	\$ 4,441	\$ 7,201	\$ 3,704	\$ 1,641
Percent increase (decrease) from previous year	(90%)	(38%)	94%	126%	41%
Earnings per share	\$ 0.03	\$ 0.33	\$ 0.54	\$ 0.32	\$ 0.16
Percent increase (decrease) from previous year	(91%)	(39%)	69%	100%	45%

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July 1986

- (a) SCT management has determined that revenue and net income reported during the first three quarters of fiscal year ending September 30, 1984 were overstated relating to the licensing of software where unconditional, binding agreements could not be substantiated. This determination, and other lesser irregularities, resulted in the restatement by SCT of its unaudited financial statements for the first three quarters of fiscal 1984 and its audited statements for fiscal year 1983.
- As a result, four class action suits were filed against SCT and certain officers on behalf of SCT stockholders.
 - In May 1985 Michael J. Emmi was elected Chairman, President, and CEO by the Board of Directors.
 - In May 1986, SCT announced an agreement in principle to settle the class and derivative actions against SCT. At the same time, the company's independent accounting firm completed an audit of SCT's first-half financial results for fiscal 1986 and removed the qualification in their report on the company's financial statements for both fiscal 1985 and the first six months of fiscal 1986 ended March 31, 1986.
- Revenue for the nine months ending June 30, 1986 was \$31.3 million, a 14% decrease from \$36.6 million for the same period in 1985. Net losses for the period were \$9 million compared to net income of \$1.5 million for the same period in 1985. SCT had recorded a provision of \$14.9 million for the class action settlement and litigation, bringing pretax losses to \$18.2 million for the six month period ending March 31, 1986.
 - SCT management attributes the decrease to a phase-back of Information Resource Management contracts and reduced software contracts.
 - SCT is divided into the following major business units, operating as profit and loss centers:
 - The Information Resource Management (IRM) division provides management and staffing operations for the information resources (computing, office automation, telecommunications) of educational institutions and governments. This division also includes SCT's technical consulting services.
 - The Systems Integration division incorporates SCT's packaged applications software, custom software development services, and telecommunications services for education and government.
 - In addition, SCT's Corporate Development Division encompasses the Law Systems Division, which provides information system software and services for law and justice agencies, and a group concentrating on SCT services for the federal government and related agencies and associations.
 - SCT had 897 employees as of May 31, 1986.

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

- Major competitors include the following:
 - Information Resources Management and professional services: in-house data processing departments, Planning Research Corporation, Computer Sciences Corporation, and Electronic Data Systems.
 - Software: American Management Systems, Management Science America, Information Associates, and Integral Systems, Inc.

KEY PRODUCTS AND SERVICES

- Approximately 89% of fiscal 1985 revenue was derived from professional services Information Resource Management contracts. Approximately 5% was derived from application software license fees, and the remaining 6% was derived from interest. A four-year revenue summary follows (\$ thousands):

	<u>9/85</u>	<u>9/84</u>	<u>9/83</u>	<u>9/82</u>
Professional services fees	\$42,268	\$40,970	\$36,122	\$27,770
Software license fees	2,266	2,122	3,200	1,140
Interest, primarily on short-term investments	<u>2,834</u>	<u>3,319</u>	<u>2,927</u>	<u>577</u>
	\$47,368	\$46,411	\$42,249	\$29,487

- Under its Information Resource Management (IRM) contracts, SCT provides planning, management, staffing, and operating capabilities for educational institution or government jurisdiction information resources--the data processing center, management information systems, office automation systems, and telecommunications systems. SCT personnel are located at a client's site to manage and/or staff any combination of these functions. Responsibilities can include data center operations, administrative systems development, budgeting control, long-term planning, user liaison, training, hardware procurement, technical and operations support, data center design and implementation, information center implementation, and integrated communications services.
 - IRM contracts typically cover a three-to-five-year period, with an option to renew. As of June 1, 1986, SCT had 34 long-term IRM contracts in effect for management and staffing services including 22 in higher education and 12 in government.
 - Some of the highlights of SCT's IRM business in fiscal 1985 include:
 - Seattle University selected IRM and SCT's applications software products.
 - Butte County (CA) extended its IRM agreement through 1989.

- Beaver County (PA) selected both IRM and SCT's financial and human resources software systems.
- Genesee Community College, Batavia (NY) approved a five-year extension of its IRM contract.
- Hillsborough Community College, Tampa (FL) extended its IRM contract and also began the implementation of SCT's student, financial, and human resources software.
- New Jersey Institute of Technology contracted for IRM services.
- Minnesota Community College System, a state-wide network of 18 campuses, selected IRM services, including the construction of a new central computing facility, and network-wide implementation of SCT's student system software.
- IRM developments in fiscal 1986 include:
 - Harvard Graduate School of Business extended its IRM contract through 1991.
 - Peoria County (IL) extended its IRM contract through 1991.
 - New Hampshire College renewed its IRM contract through 1991.
 - Associated Builders & Contractors, an association of independent contractors and builders headquartered in Washington, D.C., awarded SCT an IRM contract to develop an IBM-based local area network and a membership data base.
 - INVESCO, a company that operates five proprietary schools, headquartered in Little Rock (AR), awarded an IRM contract to SCT.
- Other IRM clients as of June 1986 include Burlington County (NJ) College, California Institute of Technology, Charleston County (SC), Cuyahoga Community College, Delaware County (PA) Community College, Departamento de Hacienda (Puerto Rico), Departamento de Salud (Puerto Rico), Houston Community College System, City of Kalamazoo (MI), Lake County (IN), Lasalle University, City of Lincoln (NE), Los Angeles County, Manhattan College, Ana G. Mendez Foundation (Puerto Rico), Northampton County (PA), Riverside (CA) Community College District, Siskiyou County (CA), Temple University, Tuskegee University, Washtenaw County (MI), Wayne County (MI) Community College, Western Michigan University, and Widener University.
- SCT offers Professional Technical Computing Services to provide on-site technical support personnel and consultants to private industry. Services

available include hardware and software performance reviews, technical audits, office automation consulting, systems programming, operating system conversions, DBMS installations or conversions, networking and telecommunications support, planning services, data center design, and training services.

- SCT provides packaged software, custom software, and telecommunications planning and implementation to higher education and government through the Systems Integration Division.
 - The Custom Software group provides custom applications software development services for government and education. An on-site development team assumes full responsibility for the software development project, including the feasibility study, design, coding, testing, and implementation, using tested methodologies for project management, software engineering, and quality assurance, such as automated project control, structured techniques, and process check points.
 - The Telecommunications group offers telecommunication consulting and management services that focus on three areas:
 - Telecommunications consulting includes planning, design, procurement, and implementation of integrated voice, data, video, security, and environmental control systems.
 - Telecommunications resource management provides on-site management and staffing of a private communications utility, including planning, engineering, traffic analysis, installation, billing, accounting, and operator assistance.
 - Microprocessor products support network-intensive applications such as executive information systems.
 - SCT's packaged on-line applications software uses data base management technology to automate the administrative, financial, and human resource functions in higher education and government, and to provide information to support management decision-making and reporting. Each system is fully integrated, and when used together, the software is integrated between systems.
 - Software packages available include the following:
 - Integrated Financial Information System (IFIS) is available in versions for government and education. IFIS is a financial information and management system for administrators, business officers, and managers. IFIS supports fund accounting (financial and management accounting, program accounting, grant accounting, year-end accounting), accounts payable, (bill-paying, encumbrances, cash disbursements, check writing, and reconcil-

iation), budget preparation, cost accounting (project, activity, and location accounting), and fixed asset control (property records and accounting, risk management, depreciation). All financial data is integrated into a single data base and more than 70 standard financial, management, and budget control reports are available. IFIS meets GAAP, GAAFR, AICPA, and NACUBO requirements.

- Human Resources Information System (HRIS) is available in government and education versions. HRIS supports applicant processing and personnel management, EEO/Affirmative Action reporting, position control, personnel services budgeting, benefit administration, financial management, time and absence reporting, payroll processing, personnel, position and payroll history, and adjustment processing. Features include future change capability, support of a wide variety of benefits and deductions, and more than 65 standard reports.
- Integrated Student Information System (ISIS) supports and automates student and faculty administrative services for higher education and provides management information for strategic planning and decision support. ISIS supports recruiting and admissions, course catalog/class schedules, registration, faculty workload, academic records, student billing/accounts receivable, financial aid, and student housing.
- Alumni & Donor Development System (ADD) establishes and maintains a data base of alumni, corporations, foundations, donors, prospects, and other fund-raising sources for colleges and universities. ADD can create targeted mailings and personalized acknowledgement letters, and can generate detailed management information for campaign analysis and financial control.
- SCT's packaged software is available for IBM, Sperry-Univac, and Honeywell mainframes.
 - The software operates with TOTAL, TIS, IDMS/R, ADABAS, and IDS II data base management systems.
- Prices for SCT software, including the license fee, installation, and on-site implementation, range from \$90,000 to \$500,000.
- Software highlights for fiscal 1985 and 1986 include the following:
 - Summit County (OH) is implementing IFIS.

- Two departments in the Ohio state government, the Department of Administrative Services and the Office of the State Auditor, are installing IFIS.
- Colorado State University selected ISIS in Cullinet Software Inc.'s IDMS/R relational data base management system environment.
- University of Hawaii selected ISIS using Software AG Corporation's ADABAS environment.
- South Dakota State Board of Regents selected ISIS under ADABAS for its six state-operated colleges and universities.
- University of California at San Diego selected the IDMS/R version of ISIS.
- The University of Santa Clara chose ISIS, IFIS, and HRIS.
- Kansas State Department of Transportation selected IFIS.
- SCT had 48 software contracts in effect as of June 1986.
- SCT's Law Systems Division provides computer information systems and services for law and justice agencies including police departments and other public safety agencies, court systems, prosecutor's offices, and jail systems.
 - Its products include Police-TRAC, a computer-aided dispatching system that automatically routes incoming incident reports to the proper dispatcher, helps prioritize police unit assignments, and monitors incident status.

INDUSTRY MARKETS

- Approximately 60% of SCT's fiscal 1985 revenue was derived from education, and 40% from government.
- The markets for SCT's products and services include:
 - Colleges, universities, and other educational institutions including proprietary schools.
 - State and local government, the federal government, and federal agencies.
 - Educational, trade, and business associations.
 - Private industry.

GEOGRAPHIC MARKETS

- All of SCT's fiscal 1985 revenue was derived from the U.S. and Puerto Rico.
- SCT maintains regional offices in Irvine (CA) and Hato Rey (Puerto Rico).

COMPUTER HARDWARE

- SCT maintains an IBM 4381 Model 2 mainframe at its headquarters for software research and development.

FINANCIAL UPDATE TO PROFILE DATED JUNE 1983*

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

Great Valley Corporate Center
4 Country View Road
Malvern, PA 19355
(215) 647-5930

Michael J. Emmi, Chairman,
President, and CEO
Public Corporation, OTC
Total Employees: 951
Total Revenue, Fiscal Year End
9/30/84: \$46,411,000

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	9/84 (a)	9/83 (a)	9/82	9/81	9/80
Revenue	\$ 46,411	\$ 42,249	\$ 29,487	\$ 19,482	\$ 16,295
• Percent increase from previous year	10%	43%	51%	20%	23%
Income before taxes	\$ 7,450	\$ 13,712	\$ 7,540	\$ 3,335	\$ 2,312
• Percent increase (decrease) from previous year	(46%)	82%	126%	44%	28%
Net income	\$ 4,441	\$ 7,201	\$ 3,704	\$ 1,641	\$ 1,162
• Percent increase (decrease) from previous year	(38%)	94%	126%	41%	18%
Earnings per share	\$ 0.33	\$ 0.54	\$ 0.32	\$ 0.16	\$ 0.11
• Percent increase (decrease) from previous year	(39%)	69%	100%	45%	10%

(a) Systems & Computer Technology Corporation (SCT) has determined that revenue and net income reported during the first three quarters of fiscal year ending September 30, 1984 were overstated relating to the licensing of software where unconditional, binding agreements could not be substantiated. This determination, and other lesser irregularities, resulted in the restatement by SCT of its unaudited financial statements for the first three quarters of fiscal 1984 and its audited statements for fiscal year 1983.

- On December 5, 1984, SCT reported that revenue and income relating to the recognition of applications software license fee income previously reported for each of the first three quarters of fiscal year

*Replaces Financial Update of March 1984

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

ending September 30, 1984, would be reduced and that an audit committee of the Board of Directors was undertaking an inquiry with the assistance of independent counsel as a result of concerns raised by SCT's auditors.

- Pursuant to the aforementioned report, four class action suits have been filed against SCT and certain present and former officers and directors on behalf of purchasers of SCT stock.
- The investigation of the audit committee and independent counsel determined that revenue for the first three quarters of fiscal 1984 that had been recognized as software license fee revenue had been overstated and unsubstantiated, and on January 25, 1985, SCT reported that revenue would be restated for those three quarters of fiscal 1984 and that the financial statements for fiscal 1983 would be reviewed.

- In connection with the above determinations, the Board of Directors requested and received the resignations as officers and directors of the then President and CEO and the then Vice President and acting Chief Financial Officer of SCT. In May 1985, the acting president resigned as an officer and director of SCT. Concurrently, Michael J. Emmi was elected Chairman, President, and CEO by the Board of Directors.

- SCT has been advised that an unfavorable outcome of litigation pending against the company and certain present and former officers and directors, on behalf of some purchasers of SCT stock, is probable. However, the amount or range of any liability that may be imposed on SCT has not been determined and, therefore, no provision for any such liability has been made in the consolidated financial statements.

- SCT's revenue for the six months ending March 31, 1985 reached \$24.7 million, a 9% increase over the restated \$22.6 million for the same period in 1984. Net income for the period was \$1.4 million, a decrease of 51% from \$2.9 million for the first six months of fiscal 1984.

SOURCE OF REVENUE

- Eighty-eight percent of SCT's fiscal 1984 revenue was derived from "Computing Resource Management" professional services, primarily facilities management contracts. Approximately 5% was derived from applications software license fees, and the remaining 7% was derived primarily from interest. A three-year revenue summary follows (\$ thousands):

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

	<u>1984</u>	<u>1983</u>	<u>1982</u>
Professional services fees	\$40,970	\$36,122	\$27,770
Software license fees	2,122	3,200	1,140
Interest on short-term investments	2,790	2,376	-
Other, primarily other interest	<u>529</u>	<u>551</u>	<u>577</u>
	\$46,411	\$42,249	\$29,487

- SCT provides professional services facilities management and applications software products to educational institutions and local government agencies in the U.S.



FINANCIAL UPDATE TO HIGHLIGHT DATED JUNE 1983

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
Great Valley Corporate Center
Four Country View Road
Malvern, PA 19355
(215) 647-5930

Frederick A. Gross, President and CEO
Public Company, OTC
Total Employees: 825
Total Revenue, Fiscal Year End
9/30/83: \$43,792,000

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	9/83	9/82	9/81	9/80	9/79
Revenue	\$ 43,792	\$ 29,487	\$ 19,482	\$ 16,295	\$ 13,300
• Percent increase from previous year	49%	51%	20%	23%	30%
Income before taxes	\$ 15,108	\$ 7,540	\$ 3,335	\$ 2,312	\$ 1,800
• Percent increase from previous year	100%	126%	44%	28%	20%
Net income	\$ 7,872	\$ 3,704	\$ 1,641	\$ 1,162	\$ 984
• Percent increase from previous year	113%	126%	41%	18%	26%
Earnings per share	\$ 0.59	\$ 0.32	\$ 0.16	\$ 0.11	\$ 0.10
• Percent increase from previous year	84%	100%	45%	10%	11%

SOURCE OF REVENUE

- Approximately 76% of Systems & Computer Technology's fiscal 1983 revenue was derived from professional services and 19% from software products. The remaining 5% was derived primarily from interest.



COMPANY HIGHLIGHT

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

Great Valley Corporate Center
Four Country View Road
Malvern, PA 19355
(215) 647-5930

Frederick A. Gross, President and CEO
Public Company, OTC
Total Employees: 743
Total Revenue, Fiscal Year End
9/30/82: \$29,487,000

THE COMPANY

- Systems & Computer Technology Corporation (SCT), founded in 1968, provides professional services computing resources and facilities management, systems development, consulting services, and applications software products to state and local governments and higher education institutions.
 - On November 2, 1982, SCT made its first public offering of 2,580,000 shares of common stock, generating net proceeds of \$31.5 million.
 - Of the proceeds, \$2 million was used to repay SCT's outstanding current operating bank debt. The remainder of proceeds will be used to provide SCT with working capital and for possible business or product acquisitions.
- Fiscal 1982 revenue was \$29.5 million, a 51% increase over 1981 revenue of \$19.5 million. Net income grew 126% to \$3.7 million from \$1.6 million. A five-year financial summary follows:

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION
(\$ thousands, except per share data)

ITEM \ FISCAL YEAR	9/82	9/81	9/80	9/79	9/78
Revenue	\$ 29,487	\$ 19,482	\$ 16,295	\$ 13,300	\$ 10,220
. Percent increase from previous year	51%	20%	23%	30%	61%
Income before taxes	\$ 7,540	\$ 3,335	\$ 2,312	\$ 1,800	\$ 1,504
. Percent increase from previous year	126%	44%	28%	20%	103%
Net income	\$ 3,704	\$ 1,641	\$ 1,162	\$ 984	\$ 783
. Percent increase from previous year	126%	41%	18%	26%	83%
Earnings per share	\$ 0.33	\$ 0.16	\$ 0.11	\$ 0.10	\$ 0.09
. Percent increase from previous year	106%	45%	10%	11%	80%

- Growth in fiscal 1982 revenue and net income is attributed to an increase in the number and size of professional services Computing Resource Management contracts and the introduction of the new data base version of SCT's applications software products in late fiscal 1981. Increase in revenue paralleled an expansion of the company's marketing staff.
- . Fiscal 1982 net income was also positively impacted by SCT's successful efforts to control costs and the effect of software license fees increasing revenue with little or no increase in expenses since related development costs were generally incurred in prior years. As a result, expenses as a percentage of total revenue decreased from 86% to 83% to 74% in fiscal 1980, 1981, and 1982 respectively.
- . In fiscal 1982, 70% of income before taxes was generated by professional services and 30% by software packages.
- Revenue derived substantially from interest was \$577,000 (2% of revenue) in fiscal 1982 and \$654,000 (3% of revenue) in fiscal 1981.
- Revenue for the six months ended March 1983 was \$19.8 million, a 51% increase over \$13.1 million for the same period in 1982. Net income increased 111% to \$3.3 million from \$1.5 million during the same period.
- During this period, professional services contributed 82% of revenue and 68% of income before taxes. Approximately 72% of professional

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

services revenue was from institutions of higher education and 28% from local government.

- Software products generated 18% of revenue and 32% of income before taxes during the six-month period.
- SCT is subdivided into two major business units.
 - The Computing Resource Management (CRM) Division is responsible for all professional services provided under SCT's CRM contracts. This division is further divided into Higher Education and Local Government business sectors.
 - The Corporate Systems and Services Group conducts all software package development, installation, implementation, education, and training.
- SCT had 743 employees as of September 1982. As of March 31, 1983, there were 872 employees.
- Competition comes from the following companies:
 - In the professional services education market, SCT competes with several of the Big 8 accounting firms, primarily the Education Division of Peat, Marwick, Mitchell, & Co. and a variety of local firms.
 - For local government professional services contracts, SCT competes with Computer Sciences Corporation, Electronic Data Systems, and several of the Big 8 accounting firms, including Peat, Marwick, Mitchell, and Touche Ross.
 - American Management Systems, Information Associates Inc. (a subsidiary of Westinghouse), Integral Systems, and Datatel offer some competition in packaged software.

KEY PRODUCTS AND SERVICES

- Approximately 86% of SCT's fiscal 1982 revenue was derived from professional services and 14% from software products.
- Professional services revenue is primarily derived from facilities management contracts under which SCT assumes responsibility for all computing activities, including academic and research technical assistance, administrative systems development, processing, operations support, budgeting control, staffing, short- and long-term planning, hardware procurement, data base software purchases, user liaison, and training. SCT markets these services as Computing Resource Management (CRM) services.
 - SCT began providing these services to educational institutions in 1972 and to local government agencies in 1975.

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

- CRM contracts usually have a minimum length of three years, and most are written for five years. Agreements are generally extended beyond the initial term for periods ranging from two to seven years.
- As of March 31, 1983, 35 CRM contracts were in effect, representing services provided to 96 separate government and educational entities.
- Examples of SCT CRM contracts with institutions of higher education include the following:
 - San Francisco Community College District, with approximately 100,000 students, recently contracted with SCT for CRM implementation consulting, approving a long-term Computing Services Master Plan involving the identification of hardware, communications equipment, and software required for a new multicampus network. The District also purchased SCT's entire line of Series II software.
 - SCT has been providing CRM services to Cuyahoga Community College (Cleveland, OH) since 1978 and is currently operating under a four-year contract extension received in early 1981. The company provides computer center management and operation; strategic planning; specification, selection, and installation of hardware; and software enhancement implementation.
 - Concentration is currently being placed on computer-assisted instruction in English, math, and science. SCT is providing total management of the college's PLATO project.
 - The company has successfully implemented all three of its Series II software products for the college.
 - SCT manages and staffs the University of Southern California's administrative processing center and supervises operations, systems programming, and administrative systems development in the areas of student information, payroll/personnel, and financial accounting.
 - Under a CRM contract with Villanova University, SCT plans and implements new administrative information systems and provides consulting support to academic services regarding the acquisition and installation of new hardware.
 - In August 1982 Wayne County Community College in Detroit approved the extension and expansion of its CRM contract with SCT through June 1984. In May 1983 SCT completed the implementation of its ISIS/II, Fund Accounting and Budget Preparation subsystems of IFIS/II, and HRIS/II systems.
 - SCT manages the California Institute of Technology's Financial and Business Services computing facilities and is currently implementing the HRIS/II system for the Institute.

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

- The San Diego Community College District, with over 100,000 full- and part-time students, originally contracted with SCT for CRM services in 1979. The District uses ISIS/II and the Fund Accounting subsystem of IFIS/II, and is implementing the Budget Preparation subsystem of IFIS/II.
- In December 1982 Western Michigan University, with 20,000 full- and part-time students, contracted with SCT for management and operation of its administrative processing center. SCT is developing a Computing Services Master Plan for the university as well as installing its ISIS/II system.
- SCT has been managing Temple University's computer center since 1976 under the original five-year contract with a five-year extension. The company is currently providing ISIS/II and HRIS/II processing enhancements, including academic history and billing subsystems.
- Local government CRM contracts include the following:
 - SCT provides technical and management support for the City and County of San Francisco Public Utilities Commission's Bureau of Management Information Services under a May 1981 contract. SCT evaluated the computer facility, recommended enhancements, completed a Computing Services Master Plan, and established a training program.
 - Butte County (CA) extended its original three-year CRM contract in November 1981 for an additional three years. SCT manages and operates the Butte County Computer Center, which serves 10 Northern California counties and handles property assessing, tax billing and collecting, welfare, elections, jury selections, and recording. SCT has designed and implemented a Jury Management System serving both the Superior and Municipal Courts, an on-line Wants and Warrants System for the Sheriff's Department, an on-line Voter Registration System with automatic precincting, an on-line Stolen Property System for local law enforcement agencies, and a Welfare Master Index System.
 - In May 1982 the City of Lincoln/Lancaster County (NE) expanded its original October 1981 CRM contract to include additional systems and related implementation services. SCT is developing a Case Management System for the Clerk of the District Court; is installing a Property System for the County Assessor, Treasurer, and Clerk; and is developing a Comprehensive Motor Vehicle System.
 - In November 1982 Oakland County (MI) approved a three-year extension to its original 1979 CRM contract. The county operates budget accounting, personnel/payroll, court records, and law enforcement information systems. SCT is assisting in the development of health and finance data base systems, is enhancing a property reporting system, is implementing a fixed assets system, and is involving the county in computing resource sharing with neighboring local governments.

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

- Under a seven-year contract initiated in December 1982, SCT is providing management and technical support for coordination and improvement of computing activities within Charleston County (SC). SCT is also implementing its IFIS/II and HRIS/II systems for the county.
- In May 1982 Maricopa County (AZ) entered into a multiyear CRM contract with SCT. SCT is coordinating computing improvement projects and has evaluated, assessed, and negotiated for mainframe and peripheral procurements.
- SCT began marketing its Series II Family of Systems of on-line applications software, an upgrade of its previous Series I software products, in late fiscal 1981. The systems incorporate data base management technology, automating the administrative, financial, and academic functions in higher educational institutions and the fiscal, human resources, and records management functions in local governments and agencies. The Integrated Financial and Human Resources Information Systems are marketed to clients in both education and local government.
- Descriptions of the products follow.
 - The Integrated Student Information System II (ISIS/II) maintains information on applicants, students, and alumni for administrative and academic uses including recruiting, admissions, registration, grade reporting, academic history and transcript processing, financial aid, catalog and scheduling, fee assessment and collection, student housing, faculty assignment, and alumni development. The System also generates reports meeting federal and state regulations in such areas as enrollment trends and student body composition.
 - Integrated Financial Information System II (IFIS/II) assists in budget preparation, with financial and expenditure reporting by program, organization, and account. The system generates financial management statements and handles bill generation, receivables and cashing, program and grant fund accounting, and payables.
 - Human Resources Information System II (HRIS/II) maintains personnel, time sheet, and payroll information for employees and job classification, budget, and control information for human resources management. Features include support of all payment intervals, user-tailored benefits/deductions, unlimited labor distributions within assignments, and the ability to anticipate and promote pro forma changes and balancing controls.
- The systems run on IBM 360, 370, 30XX, and 43XX (OS and DOS), Univac (VS/9), and Honeywell (GCOS) mainframes.

SYSTEMS & COMPUTER TECHNOLOGY CORPORATION

- Series II software is designed to use the data base management systems of vendors including IBM, Honeywell, Univac, Cincom, Cullinet, and Software AG.
- Pricing for each product, which includes a fixed license fee of \$125,000 and additional fees for installation and training, ranges from \$170,000 to \$250,000 and averages \$200,000.
- o Future plans for product and services development include:
 - Development of a mainframe/personal computer software and communications link providing the means to download data base information to distributed personal computers.
 - Operation of regional data centers accessed via personal computer workstations by smaller institutions and jurisdictions.
 - Provision of configuration management services for the purchase of personal computers, depending on applications requirements.

INDUSTRY MARKETS

- o Approximately 80% of SCT's fiscal 1982 revenue was derived from institutions of higher education and 20% from state and local government.
 - SCT's primary educational market includes the 2,500 U.S. colleges and universities with student populations of 2,000 or more.
 - The primary state and local government market includes the 2,800 jurisdictions with populations of over 50,000.

GEOGRAPHIC MARKETS

- o Virtually all of SCT's fiscal 1982 revenue was derived from the U.S. Less than 1% of 1982 revenue was from foreign sales of software products to the University of Tel Aviv.
- o Regional offices are located in San Diego, Dallas, and Puerto Rico. SCT personnel may also be contacted at any CRM site.

COMPUTER HARDWARE

- o SCT does not have any installed hardware. Software development and processing is accomplished via interfaces to client mainframes.



COMPANY HIGHLIGHT

**SYSTEMS AND COMPUTER
TECHNOLOGY CORPORATION**
Great Valley Corporate Center
4 Country View Road
Malvern, PA 19355
(215) 647-5930

Frederick A. Gross, President
Private Corporation
Total Employees:
Approximately 1,000
Total Revenues, Fiscal Year End
9/30/80: \$35,000,000*

THE COMPANY

- Systems and Computer Technology Corporation (SCT) was founded in 1968 by Frederick A. Gross and a group of computer management consultants and specialists to provide consulting services to government and educational institutions. SCT offers a comprehensive range of computing resource management, systems development and consulting services to higher education, state and local governments, and related health facilities.
- SCT's revenues in FY 1980 are estimated to be about \$35 million. SCT management states that the company is profitable.
- SCT has three operating divisions and one support group:
 - Education Systems Division provides facilities management services to colleges and universities. It has served approximately 150 colleges and universities in areas of student systems, financial systems, network design, academic services, technical management and computer operations support.
 - Government Systems Division provides facilities management and consulting services to state and local governments. It has assisted approximately 100 government agencies in areas of public safety, human resources, economic planning and financial administration.
 - Student Administrative Services Division was formed in 1979 to provide systems design and consulting services to higher education. These services were offered previously by the Education Systems Division.
 - The Software Development group provides customized applications software packages usually in support of SCT's other divisions.

KEY PRODUCTS AND SERVICES

- All of SCT's revenues are derived from facilities management and professional services.

COMPANY HIGHLIGHT/SYSTEMS AND COMPUTER TECHNOLOGY CORPORATION

- SCT's facilities management contracts generally range in length from one to six years. Two types of facilities management services are offered:
 - SCT will provide a complete management and technical team to operate a client's EDP center and design and implement new systems.
 - SCT will provide just a management staff, generally an EDP manager and assistant manager. The technical support staff would be provided by the client.
- Recent contracts awarded to SCT have included:
 - A multi-year contract with Northhampton County (PA) whereby SCT will assume total responsibility for the management and operation of the county's computing activities.
 - A four-and-a-half-year contract with the Vermont State Colleges to provide management and technical assistance in areas of computer operations, hardware evaluation and selection, systems development and implementation, and administrative services.
 - A five-year contract with Ventura County (CA) to develop, manage and implement a financial system for the Auditor Controllers office.
 - A five-year extension to a previous contract with Temple University to provide complete facilities management support.
 - A new five-year facilities management contract with the City of New Orleans.
- Some of SCT's major clients in the education sector have included the following:
 - University of Alaska.
 - University of Miami (FL).
 - Simmons College, Boston.
 - Cuyahoga Community College (OH).
 - Wayne County Community College, Detroit.
 - Delaware County Community College (PA).
 - Black Hawk College (IL).
- SCT also specializes in providing consulting and facilities management services to state and local government. Major clients in this sector have included:

COMPANY HIGHLIGHT/SYSTEMS AND COMPUTER TECHNOLOGY CORPORATION

- Butte County (CA).
- State of Alaska.
- Oakland County (MI).
- Jefferson County (KY).
- In addition to facilities management services, SCT has had long- and short-term professional services contracts with numerous government agencies and educational institutions. Some of the major ones are: San Luis Obispo County (CA), Los Angeles County, Kentucky's Department of Economic Security, Shelby County (IN), San Mateo County (CA), the University of Wisconsin at Whitewater and the University of Rhode Island.
 - Examples of previous contracts include:
 - Design and implementation of financial information systems such as the Financial Information and Resource Management System (FIRM) for Los Angeles County.
 - Design and implementation of the Court Law Enforcement and Management Information System (CLEMIS), which provides local police departments in Oakland County (MI) with information on arrests and convictions of known criminals.
 - Design and implementation of SCT's Integrated Student Information System for MIT.
- SCT has two major proprietary software systems that encompass many of the most common applications used by education and government clients. However, because of degrees of differences in information needs, each system is customized to meet a client's requirements.
 - The Library of College and University Systems (LOCUS) consists of two subsystems.
 - Integrated Student Information Systems (ISIS) includes applications for student scheduling, add/drop processing, grade reporting, admissions, financial/accounting reporting, course and examination scheduling and admissions.
 - Integrated Financial Information Systems (IFIS), with versions available for both batch and on-line processing, includes:
 - Fund Accounting System (FAS).
 - Human Resource Information System (payroll, personnel, position budgeting/control).
 - Accounts receivable.
 - Accounts payable.

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- Budget preparation.
- The Library of Government Systems (LOGOS) contains applications for the following:
 - Human Services Systems for information and referral (I&R), health information, case management, substance abuse reporting, income maintenance and CETA/MIS.
 - Criminal Justice Systems include police information, correction, juvenile justice, motor vehicle registration and management systems for courts and prosecutors.
 - Physical and Economic Development Systems provide fire incident reporting (UFIRS), integrated land records, street/utility network, integrated permits and inspection, automated tax assessment (appraisal, billing, accounting), and the economic development information system (EDIS).
 - Planning and Management Support Systems provide tools for geoprocessing, computer mapping and statistical analysis with query and ad hoc reporting.
- SCT is involved in developing new systems in areas of computer-assisted instruction (CAI) and computer-managed instruction (CMI). SCT has tested these systems at Cuyahoga and Wayne community colleges and will be implementing them at various client locations.

INDUSTRY MARKETS

- All of SCT's revenues are derived from educational institutions and state and local governments.

GEOGRAPHIC MARKETS

- SCT derives all of its revenues from the United States.
- Principal offices are located in Anchorage, Boston, Chicago, Cleveland, Fairbanks, Los Angeles, Memphis, New Orleans and Philadelphia.

COMPANY HIGHLIGHT

SYSTEMS ARCHITECTS, INC.

SAI Research and Development Park
Thomas Patten Drive
Randolph, MA 02368
(617) 961-2700

George S. Pan, President
Private Corporation
Total Employees: 400
Total Revenue, Fiscal Year End
2/28/84: \$18,000,000*
Computer Services Revenue:
\$10,800,000*

THE COMPANY

- Systems Architects, Inc. (SAI) was founded in 1970 to provide consulting services in data processing and telecommunications systems. The company has since expanded its business to provide proprietary systems and applications software products, processing services, and custom turnkey systems to government and commercial clients. SAI is also an OEM for IBM and DEC.
- INPUT estimates SAI's fiscal 1984 revenue was approximately \$18 million, a decline of 18% from fiscal 1983 estimates of \$22 million.
- SAI is comprised of the following divisions:
 - Management Sciences Division designs management information systems, data base management software, and worldwide data processing (DP)/telecommunications systems using operations research techniques and SAI design tools.
 - Telecommunications Division designs worldwide/nationwide telecommunications networks and conducts long-range planning studies for voice, data, and facsimile communications using SAI design tools.
 - Research and Development Division is responsible for operating the SAI Software Factory and for the development of new software techniques, proprietary software products, and design tools.
 - Transportation Technology Division is responsible for transportation planning, systems design, engineering, and related energy, environmental, and socioeconomic studies.
 - Social Systems Division supports health care and financial systems for federal and state government programs including CHAMPUS, MEDICARE, MEDICAID, FEP, AFDC, SSI, ERISA, Veterans' Benefits, and the Guaranteed Student Loan Program.

*INPUT estimate

SYSTEMS ARCHITECTS, INC.

- Application Systems Division is responsible for the implementation of custom turnkey systems and for providing facilities management for major government agencies. The division provides user requirements analysis; hardware and software selection; systems design; and user training, including the use of SAI proprietary software as systems development tools.
 - Business Systems Division provides turnkey systems and management consulting services concerning business-related applications such as payroll, accounts receivable, accounts payable, inventory, purchasing, sales, budgeting, personnel, and general ledger.
 - Municipal Systems Division provides capability and management consulting services for municipal applications such as payroll, financial management, tax collection, administrative duties, budget, education, property assessment, and management information.
 - Defense Programs Division supports Defense Programs' DP/telecommunications technology for major DOD, Air Force, Army, and Navy agencies.
 - Resident Services Division provides on-site technical and professional support for federal, state, and commercial projects, including management consulting, operations research, programming, and data entry support activities.
 - Facility Management Division provides all necessary facilities management, professional and clerical support, computer equipment, and software services at SAI and client-owned facilities.
 - Computer Application Division is responsible for applications software development, scientific programming, software library support, and software surveys.
- Major competitors include TRW, Computer Sciences Corporation, and Planning Research Corporation.

KEY PRODUCTS AND SERVICES

- INPUT estimates SAI's fiscal 1984 revenue was derived approximately as follows:

Processing services	
(facilities management and	
remote computing	30%
Software products	20
Professional services	10
Hardware sales	40
	100%

SYSTEMS ARCHITECTS, INC.

- The focus of SAI's business is providing professional services (including systems analysis, design, development, and programming), using highly structured project methodologies. The company has experience in the following areas:
 - DP/telecommunications systems and user requirement analyses.
 - Management Information Systems design and development.
 - Technical Information Systems design and development.
 - Economic and feasibility studies/alternative analysis.
 - Statistical analysis and evaluation.
 - DP requirements analysis and resource planning.
 - Hardware and software specifications development and evaluation.
 - Software development and evaluation.
 - Software validation and verification.
 - Applications software maintenance.
 - DBMS development and applications.
 - System conversion planning and implementation.
 - System testing and installation.
 - User, program, and system documentation.
 - Training and training program development.
 - Program and data library maintenance.
 - On/off site systems support services.
 - Production control, planning, and scheduling.
 - Accounting and financial systems development.
 - Custom turnkey system development and support.
- SAI has developed a group of systems software products, referred to as the Software Factory, which its staff uses for custom system analysis, development, and verification/validation.
 - The Software Factory serves as a central depository for all reusable software development routines and develops portable software for installation on other large-scale computers or minicomputers.
- Professional services projects include:
 - Analysis of support system and documentation transaction flow for the Air Force Cryptologic Support Center to identify current and future information requirements and determine a long-range system plan.
 - Providing support to the U.S. Air Force Electronics Systems Division in the following areas:
 - Systems specification and procurement guidelines for an automated weather information system.
 - Assessment and documentation of information needs related to an Air Force Worldwide Military Command and Control System.

- Development of a business reporting system to provide budget control and financial tracking for the Joint Tactical Information Distribution System.
- As a result of developing a structured project methodology, SAI has created additional various analytical software tools that are applicable to a variety of consulting projects. These software tools are available to SAI clients as software packages for use on their own in-house systems and applications on SAI's remote computing network, ACTIONet.
 - Tools are available for application software generation, decision support, software development and testing, conversions, and interactive information management.
- Applications software is available for financial management; travel agency; and library management applications; as well as for information retrieval and runs on IBM 4300 mainframe, DEC VAX, and Data General minicomputers. The products are available as separate software packages or as applications on ACTIONet.
 - Advanced Management Systems (AMS) is a financial management system with modules for payroll, budgeting, sales, accounts payable/receivable, procurement, personnel, general ledger, inventory, and contract management.
 - Travel Agency System (TAS) provides modules for travel agency management.
 - Library Applications System Automation (LASA) is an interactive system controlling cataloging, circulation, selection, and acquisitions for library management.
- Processing services provided by SAI to its clients include:
 - Interactive processing services: clients can remotely access all SAI software listed in the exhibit via the ACTIONet network.
 - Several data bases are also available, including Procurement Automated Source System (PASS), a small business information data base, and TPIS, a listing of over 6,000 telecommunications products.
 - Facilities management (FM): SAI offers long-term contracts providing dedicated SAI-owned computers for specific clients' needs.
 - In 1983 SAI built and staffed a dedicated data center in Washington, D.C. for the U.S. Customs Service to handle its administrative and advanced merchandising processing.

SYSTEMS ARCHITECTS, INC.

- In 1983, SAI was awarded a three-year, \$15 million FM contract with the U.S. Army Corps of Engineers to manage their Saudi Arabian installation.
- SAI also has had FM arrangements with the Department of Labor and the Internal Revenue Service.
- Data entry services: SAI provides secured data entry services to various agencies of the U.S. government, including the Department of Defense.
- SAI is an original equipment manufacturer (OEM) for IBM and Digital Equipment Corporation. The hardware is marketed to clients in conjunction with SAI systems software or custom-developed applications.

INDUSTRY MARKETS

- SAI's fiscal 1984 revenue was derived from commercial clients in a variety of industry sectors and from the federal government.

GEOGRAPHIC MARKETS

- INPUT estimates 100% of SAI's fiscal 1984 revenue was derived from the U.S.
- SAI maintains eight permanent offices for project support, as follows:
 - Randolph (MA), Corporate Headquarters.
 - Falls Church (VA), Federal Support Headquarters.
 - Lexington (MA), Defense Systems Support Facility.
 - Dayton (OH), Air Force and Midwest Support.
 - Bloomington (IN), Naval and Midwest Support.
 - Fall River (MA), Secure Data Entry Facility.
 - Denver (CO), Western Region Support.
 - Warren (MI), U.S. Army and Commercial Support (Great Lakes Regions).
- In addition to permanent offices, SAI also regularly establishes temporary on-site offices to support its clients in their various project phases.
- SAI maintains foreign offices in support of U.S. clients with locations in Canada, Germany, Japan, the Virgin Islands, and the Midwest.

COMPUTER HARDWARE AND SOFTWARE

- SAI has the following computers installed:
 - Randolph (MA).
 - DECSYSTEM-20/60.
 - DEC VAX-11/780.

SYSTEMS ARCHITECTS, INC.

- Honeywell Level 6.
 - Data General NOVA.
- Alexandria (VA).
 - IBM 4341.
 - IBM 3081.
 - Harris 1200.
 - Datapoint 6600.
- Dayton (OH).
 - IBM 4341.
 - IBM 3081.
 - DEC VAX-11/780.
- Fall River (MA)
 - Four Phase IV-90.

FINANCIAL UPDATE TO PROFILE DATED SEPTEMBER 1984

SYSTEMS ASSOCIATES, INC.

412 East Boulevard
P.O. Box 36305
Charlotte, NC 28236
(704) 333-1276

John W. Weil, Chairman
William G. Anthony, President
Public Corporation, OTC
Total Employees: 347
Total Revenue, Fiscal Year End
1/31/85: \$31,133,000

SYSTEMS ASSOCIATES, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1/85	1/84	1/83	1/82	1/81
Revenue	\$ 31,133	\$ 20,049	\$ 12,003	\$ 9,194	\$ 5,851
• Percent increase from previous year	55%	67%	31%	57%	17%
Income before taxes	\$ 5,014	\$ 2,914	\$ 1,774	\$ 1,079	\$ 412
• Percent increase (decrease) from previous year	72%	64%	64%	162%	(41%)
Net income	\$ 2,754	\$ 1,671	\$ 963	\$ 560	\$ 233
• Percent increase (decrease) from previous year	65%	74%	72%	140%	(33%)
Earnings per share	\$ 1.12	\$ 0.77	\$ 0.53	\$ 0.31	\$ 0.13
• Percent increase (decrease) from previous year	45%	45%	71%	138%	(32%)

SOURCE OF REVENUE

- One hundred percent of Systems Associates' fiscal 1985 revenue was derived from its hospital turnkey systems and associated maintenance services. A three-year summary follows (\$ thousands):

	<u>1/85</u>	<u>1/84</u>	<u>1/83</u>
Equipment sales and software fees	\$24,640	\$15,944	\$9,242
Maintenance and service fees	<u>6,493</u>	<u>4,105</u>	<u>2,761</u>
	\$31,133	\$20,049	\$12,003



FINANCIAL UPDATE TO PROFILE DATED SEPTEMBER 1984*

SYSTEMS ASSOCIATES, INC.

412 East Boulevard
P.O. Box 36305
Charlotte, NC 28236
(704) 333-1276

John W. Weil, Chairman
Larry R. Ferguson, President
Public Corporation, OTC
Total Employees: 356
Total Revenue, Fiscal Year End
1/31/86: \$32,885,000

SYSTEMS ASSOCIATES, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1/86	1/85	1/84	1/83	1/82
Revenue	\$ 32,885	\$ 31,133	\$ 20,049	\$ 12,003	\$ 9,194
• Percent increase from previous year	6%	55%	67%	31%	57%
Income (loss) before taxes	\$ (565)	\$ 5,014	\$ 2,914	\$ 1,774	\$ 1,079
• Percent increase (decrease) from previous year	(111%)	72%	64%	64%	162%
Net income (loss)	\$ (270)	\$ 2,754	\$ 1,671	\$ 963	\$ 560
• Percent increase (decrease) from previous year	(110%)	65%	74%	72%	140%
Earnings (loss) per share	\$ (0.11)	\$ 1.12	\$ 0.77	\$ 0.53	\$ 0.31
• Percent increase (decrease) from previous year	(110%)	45%	45%	71%	138%

- Net losses for fiscal 1986 resulted from increased operating costs, including the hiring of additional personnel, in anticipation of contract signings that did not materialize.
- Selling, general, and administrative expenses rose to \$12.2 million (37% of revenue) in fiscal 1986, compared to \$8.8 million (28% of revenue) in fiscal 1985, and \$5.9 million (29% of revenue) in fiscal 1984. This increase resulted primarily from decentralization of the company's organization into four regional offices, each with marketing, installation, field engineering, and customer support personnel.

*Replaces Financial Update of April 1985

1 of 3
September 1986

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INPUT

SYSTEMS ASSOCIATES, INC.

- Research and development expenditures were \$2.8 million (9% of revenue) in fiscal 1986, \$1.7 million (6% of revenue) in fiscal 1985, and \$1.2 million (6% of revenue) in fiscal 1984.
- During fiscal 1986 SAI acquired JANNA Medical Systems of St. Louis (MO) in an asset purchase transaction. Terms of the purchase were not disclosed.
 - JANNA provides nursing department management services and markets JANNA PLUS®, an IBM PC-based turnkey system for nurse staffing management.
 - JANNA now operates as a division of SAI.
- Revenue for the six months ending July 31, 1986 was \$16.6 million, a 3% decrease from \$17.2 million for the same period in 1985. Net income was \$498,000 compared to \$578,000 for the same period a year ago.

SOURCE OF REVENUE

- One hundred percent of SAI's fiscal 1986 revenue was derived from its hospital turnkey systems and associated maintenance services. A three-year source of revenue summary follows (\$ thousands):

	<u>1/86</u>	<u>1/85</u>	<u>1/84</u>
Equipment sales and software fees	\$23,067	\$24,640	\$15,944
Maintenance and service fees	<u>9,818</u>	<u>6,493</u>	<u>4,105</u>
	\$32,885	\$31,133	\$20,049

- As of January 31, 1986, SAI had 265 clients in 43 states, the District of Columbia, and Puerto Rico.
 - During fiscal 1986 a total of 140 systems were sold and 45 new clients were added.
 - During fiscal 1985 a total of 135 systems were sold and 52 new clients were added.
- For the six months ending July 31, 1986, 38 systems were sold to 13 new and 9 existing customers.

NEW PRODUCTS AND SERVICES

- During fiscal 1985 and 1986 SAI introduced the SAINT® Plus product line, a new series of integrated application software products that incorporate a modular design that allows a hospital to expand its system as needed.

SYSTEMS ASSOCIATES, INC.

- The SAINT Plus Financial System permits the hospital to retain all data from patient admission, patient billing, accounts receivable, to bad debt collection. Applications available include Accounts Payable, General Ledger, Human Resources Management, Materials Management, Fixed Assets, Medical Records, DRG and Case Mix Analysis, and Electronic Billing.
- The SAINT Plus Patient Care System components include Order Entry and JANNA Plus (for nurse staffing management).
- The SAINT Plus Clinical Systems include Pharmacy Management and Laboratory Management.
- During fiscal 1986 SAINT Plus Financial System upgrades were installed in 26 client hospitals. Fifteen Laboratory Systems, 29 Pharmacy Systems, and 18 Patient Care Systems were signed.
- The Macro-SAINT turnkey system now uses a DEC Micro VAX computer operating under VMS networked with SAINT CPUs to control and manage the SAINT data bases.
- In June 1986 SAI announced an agreement with Curtis 1000 Information Systems (CIS) of Atlanta to provide a computer system linking hospitals with physicians.
 - The joint program is named SAINT/MPM 1000 Hospital/Physician Network (HPN) and will allow physicians to link their CIS office computer systems to SAI hospital computers for access to patient medical information.



COMPANY HIGHLIGHT

SYSTEMS ASSOCIATES, INC.

412 East Boulevard
P.O. Box 36305
Charlotte, NC 28236
(704) 333-1276

John W. Weil, President
Public Corporation, OTC
Total Employees: 224
Total Revenue, Fiscal Year End
1/31/84: \$20,049,000

THE COMPANY

- Systems Associates, Inc. (SAI) was founded in 1966 to provide professional services to a variety of industries. In 1974 SAI developed a turnkey system for hospitals, which has become the primary business of the company.
- Fiscal 1984 revenue of \$20 million represented an increase of 67% over 1983 revenue of \$12 million. Net income rose 74% to \$1.67 million in 1984 from \$963,000 in 1983. A five-year financial summary follows:

SYSTEMS ASSOCIATES, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1984	1983	1982	1981	1980
Revenue	\$ 20,049	\$ 12,003	\$ 9,194	\$ 5,851	\$ 5,000
• Percent increase from previous year	67%	31%	57%	17%	120%
Income before taxes	\$ 2,914	\$ 1,774	\$ 1,079	\$ 412	\$ 694
• Percent increase (decrease) from previous year	64%	64%	162%	(41%)	182%
Net income	\$ 1,671	\$ 963	\$ 560	\$ 233	\$ 346
• Percent increase (decrease) from previous year	74%	72%	140%	(33%)	108%
Earnings per share (a)	\$ 0.77	\$ 0.53	\$ 0.31	\$ 0.13	\$ 0.19
• Percent increase (decrease) from previous year	45%	71%	138%	(32%)	111%

(a) Adjusted to reflect a 30-for-1 stock split paid in April 1983.

SYSTEMS ASSOCIATES, INC.

- In 1982 SAI made an initial public offering which was completed on May 20, 1983. The stock was initially priced at \$16 per share and produced \$6,870,000 in net proceeds.
- On April 25, 1984, SAI filed a registration statement with the Securities and Exchange Commission for a combined offering of 600,000 shares of common stock. The company sold 200,000 shares with the remainder sold by certain stockholders. The proceeds of this offering, approximately \$2,896,000, are being used to construct an addition to the company's corporate headquarters.
- Systems Associates typically spends 6-7% of total revenue on software development. Such costs amounted to \$1.2 million in 1984, \$760,000 in 1983, and \$633,000 in 1982.
- For the six months ended July 31, 1984, Systems Associates had revenue of \$13,226,000, an increase of 85% over revenues from the same period in 1983. Net income increased 323% during that period, from \$238,000 to \$1,007,000.
- As of July 31, 1984, SAI employed 283 people, segmented as follows:

Marketing/sales	50
Software support	100
Hardware maintenance	56
General and administrative	43
Research and development	<u>34</u>
	283
- The company's principal competitor is HBO & Company. SAI also competes with several hardware manufacturers, packaged software vendors, and professional services firms that offer products and services to acute care hospitals with 50 to 300 beds.

KEY PRODUCTS AND SERVICES

- Nearly 100% of SAI's revenue is derived from its on-line turnkey hospital system, SAINT®. Introduced in 1974, SAINT was designed to integrate all financial and patient care functions for small acute care hospitals.
 - SAI markets SAINT to hospitals ranging in size from 50 to 300 beds.
 - SAINT runs on hardware assembled by SAI—a minicomputer CPU with fixed disk and magnetic tape drives, video display terminals, serial and line printers, and communications modems.
 - SAINT is available in four system configurations: Macro, Midi, Mini, and Micro.

- Macro SAINT, first installed in 1983, is based on a DEC VAX 11/750 CPU. Designed for larger (150 to 300 bed) hospitals, it can support up to 200 terminals. Because of its larger capacity, it also offers smaller hospitals access to the full range of SAI's software applications. As of July 31, 1984, two Macro SAINT systems have been sold.
- Midi SAINT is the name given to the basic system which was first installed in 1975. SAI sold 115 of these systems in fiscal 1984 to 53 new hospitals and 29 existing clients.
- Mini SAINT, introduced in February 1984, is intended for hospitals with 50 beds or less. It supports up to four terminals, a line printer, and a modem. The software currently available for this configuration includes patient accounting, general ledger, accounts payable, DRG/case mix reporting, and an optional payroll module. As of July 31, 1984, two Mini SAINT systems have been sold.
- Micro SAINT was introduced in February 1984. It is a stand-alone personal computer that allows clients to extract information from the main SAINT data base and use it for specialized off-line functions such as spreadsheet analysis, word processing, and graphics display. Micro SAINT sells for approximately \$5,000.
- SAINT software is comprised of five standalone modules that can be installed separately or together. In total, the modules cover 40 applications, as shown in the exhibit.
- The price of a SAINT system depends on its configuration, which is determined by the number of hospital beds, the frequency of outpatient and emergency room visits, the volume of daily transactions, and the desired software applications.
 - A typical system for a 100-bed hospital costs approximately \$150,000 to \$500,000; for a 200-bed hospital the price range is \$250,000 to \$750,000, and for a 300-bed hospital it costs from \$250,000 to over \$1 million.
 - Installation, customer support, software modifications, program debugging, and hardware maintenance are provided to all SAI clients.
 - Software support is available 24 hours a day, 365 days a year via 300 and 1,200 baud dial-up telephone lines to the Charlotte facility. This telecommunications link permits modification of programs and correction of operator error.
 - SAI clients pay a monthly maintenance fee on the hardware and software, which is typically 1% of the system purchase price per year.

EXHIBIT

SAINT SOFTWARE APPLICATIONS

- | | |
|--|---|
| <ul style="list-style-type: none">● SAINT Financial<ul style="list-style-type: none">- Patient Billing- Outpatient Point-of-Service Billing- Physicians Billing- Outside Clinical Services Billing- Automated Tape Billing- Tape to Tape Billing- Patient Logs- Third Party Logs- Bad Debts- Collection Agency Interface- Accounting- Accounts Payable- Cost Allocation- Cash Control- Interest Charge Calculator- Fixed Assets/Preventative Maintenance Scheduling- Direct Deposit Tape- Payroll/Personnel- Fund Raising- Education Information- Mailing List- Embosser Interface- Microfiche- Inventory Control/Purchasing- Report Generator- Password Protection | <ul style="list-style-type: none">● SAINT Patient Care<ul style="list-style-type: none">- Online Admissions, Discharges and Transfers- Online Outpatient and Emergency Room Registration- Master Patient Index- Medical Records Index- Online Medical Records Abstracting- Radiology Index- DRG/Case Mix Reporting- Amherst Interface- Surgery Scheduling- Order Entry● SAINT Laboratory<ul style="list-style-type: none">- Laboratory● SAINT Pharmacy<ul style="list-style-type: none">- Pharmacy● SAINT Time and Attendance<ul style="list-style-type: none">- Time and Attendance● For Macro SAINT:<ul style="list-style-type: none">- VAX/SAINT File Manager |
|--|---|

SYSTEMS ASSOCIATES, INC.

- In fiscal 1984 SAI generated \$4.1 million in revenue from maintenance and service fees. This represents 20% of total revenue.
- As of July 1984, 200 hospitals are using a total of more than 300 SAINT systems.

INDUSTRY MARKETS

- One hundred percent of SAI's revenue is derived from the hospital industry. Clients include both nonprofit and for-profit hospitals.

GEOGRAPHIC MARKETS

- All of SAI's revenue is derived from U.S. clients.
- SAI has branch offices in Los Angeles, San Francisco, Columbia (MD), Orlando, Arlington (TX), Chicago, Colorado Springs, Atlanta, Bellevue (WA), Boston, Richmond (VA), Shreveport, and Plainsboro (NJ).
- In addition, SAI has field engineering offices in the following locations: Port Hueneme and Sacramento (CA), Seattle and Spokane (WA), Denver, Augusta (GA), Tampa, Washington (DC), and Buffalo.
- SAI is beginning to research foreign markets.

COMPUTER HARDWARE AND SOFTWARE

- Midi SAINT and Macro SAINT are used by SAI at its Corporate Data Center for internal reporting and product development.



FINANCIAL UPDATE TO PROFILE DATED SEPTEMBER 1984

SYSTEMS ASSOCIATES, INC.

412 East Boulevard
P.O. Box 36305
Charlotte, NC 28236
(704) 333-1276

John W. Weil, Chairman
William G. Anthony, President
Public Corporation, OTC
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Total Revenue, Fiscal Year End
1/31/85: \$31,133,000

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Net income	\$ 2,754	\$ 1,671	\$ 963	\$ 560	\$ 233
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• Percent increase (decrease) from previous year	45%	45%	71%	138%	(32%)

SOURCE OF REVENUE

- One hundred percent of Systems Associates' fiscal 1985 revenue was derived from its hospital turnkey systems and associated maintenance services. A three-year summary follows (\$ thousands):

	1/85	1/84	1/83
Equipment sales and software fees	\$24,640	\$15,944	\$9,242
Maintenance and service fees	<u>6,493</u>	<u>4,105</u>	<u>2,761</u>
	\$31,133	\$20,049	\$12,003



COMPANY HIGHLIGHT

SYSTEMS ASSOCIATES, INC.

412 East Boulevard
P.O. Box 36305
Charlotte, NC 28236
(704) 333-1276

John W. Weil, President
Public Corporation, OTC
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THE COMPANY

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Income before taxes	\$ 2,914	\$ 1,774	\$ 1,079	\$ 412	\$ 694
• Percent increase (decrease) from previous year	64%	64%	162%	(41%)	182%
Net income	\$ 1,671	\$ 963	\$ 560	\$ 233	\$ 346
• Percent increase (decrease) from previous year	74%	72%	140%	(33%)	108%
Earnings per share (a)	\$ 0.77	\$ 0.53	\$ 0.31	\$ 0.13	\$ 0.19
• Percent increase (decrease) from previous year	45%	71%	138%	(32%)	111%

(a) Adjusted to reflect a 30-for-1 stock split paid in April 1983.

SYSTEMS ASSOCIATES, INC.

- In 1982 SAI made an initial public offering which was completed on May 20, 1983. The stock was initially priced at \$16 per share and produced \$6,870,000 in net proceeds.
- On April 25, 1984, SAI filed a registration statement with the Securities and Exchange Commission for a combined offering of 600,000 shares of common stock. The company sold 200,000 shares with the remainder sold by certain stockholders. The proceeds of this offering, approximately \$2,896,000, are being used to construct an addition to the company's corporate headquarters.
- Systems Associates typically spends 6-7% of total revenue on software development. Such costs amounted to \$1.2 million in 1984, \$760,000 in 1983, and \$633,000 in 1982.
- For the six months ended July 31, 1984, Systems Associates had revenue of \$13,226,000, an increase of 85% over revenues from the same period in 1983. Net income increased 323% during that period, from \$238,000 to \$1,007,000.
- As of July 31, 1984, SAI employed 283 people, segmented as follows:

Marketing/sales	50
Software support	100
Hardware maintenance	56
General and administrative	43
Research and development	<u>34</u>
	283
- The company's principal competitor is HBO & Company. SAI also competes with several hardware manufacturers, packaged software vendors, and professional services firms that offer products and services to acute care hospitals with 50 to 300 beds.

KEY PRODUCTS AND SERVICES

- Nearly 100% of SAI's revenue is derived from its on-line turnkey hospital system, SAINT®. Introduced in 1974, SAINT was designed to integrate all financial and patient care functions for small acute care hospitals.
 - SAI markets SAINT to hospitals ranging in size from 50 to 300 beds.
 - SAINT runs on hardware assembled by SAI--a minicomputer CPU with fixed disk and magnetic tape drives, video display terminals, serial and line printers, and communications modems.
 - SAINT is available in four system configurations: Macro, Midi, Mini, and Micro.

- Macro SAINT, first installed in 1983, is based on a DEC VAX 11/750 CPU. Designed for larger (150 to 300 bed) hospitals, it can support up to 200 terminals. Because of its larger capacity, it also offers smaller hospitals access to the full range of SAI's software applications. As of July 31, 1984, two Macro SAINT systems have been sold.
- Midi SAINT is the name given to the basic system which was first installed in 1975. SAI sold 115 of these systems in fiscal 1984 to 53 new hospitals and 29 existing clients.
- Mini SAINT, introduced in February 1984, is intended for hospitals with 50 beds or less. It supports up to four terminals, a line printer, and a modem. The software currently available for this configuration includes patient accounting, general ledger, accounts payable, DRG/case mix reporting, and an optional payroll module. As of July 31, 1984, two Mini SAINT systems have been sold.
- Micro SAINT was introduced in February 1984. It is a stand-alone personal computer that allows clients to extract information from the main SAINT data base and use it for specialized off-line functions such as spreadsheet analysis, word processing, and graphics display. Micro SAINT sells for approximately \$5,000.
- SAINT software is comprised of five standalone modules that can be installed separately or together. In total, the modules cover 40 applications, as shown in the exhibit.
- The price of a SAINT system depends on its configuration, which is determined by the number of hospital beds, the frequency of outpatient and emergency room visits, the volume of daily transactions, and the desired software applications.
 - A typical system for a 100-bed hospital costs approximately \$150,000 to \$500,000; for a 200-bed hospital the price range is \$250,000 to \$750,000, and for a 300-bed hospital it costs from \$250,000 to over \$1 million.
 - Installation, customer support, software modifications, program debugging, and hardware maintenance are provided to all SAI clients.
 - Software support is available 24 hours a day, 365 days a year via 300 and 1,200 baud dial-up telephone lines to the Charlotte facility. This telecommunications link permits modification of programs and correction of operator error.
 - SAI clients pay a monthly maintenance fee on the hardware and software, which is typically 1% of the system purchase price per year.

EXHIBIT

SAINT SOFTWARE APPLICATIONS

- SAINT Financial
 - Patient Billing
 - Outpatient Point-of-Service Billing
 - Physicians Billing
 - Outside Clinical Services Billing
 - Automated Tape Billing
 - Tape to Tape Billing
 - Patient Logs
 - Third Party Logs
 - Bad Debts
 - Collection Agency Interface
 - Accounting
 - Accounts Payable
 - Cost Allocation
 - Cash Control
 - Interest Charge Calculator
 - Fixed Assets/Preventative Maintenance Scheduling
 - Direct Deposit Tape
 - Payroll/Personnel
 - Fund Raising
 - Education Information
 - Mailing List
 - Embosser Interface
 - Microfiche
 - Inventory Control/Purchasing
 - Report Generator
 - Password Protection
- SAINT Patient Care
 - Online Admissions, Discharges and Transfers
 - Online Outpatient and Emergency Room Registration
 - Master Patient Index
 - Medical Records Index
 - Online Medical Records Abstracting
 - Radiology Index
 - DRG/Case Mix Reporting
 - Amherst Interface
 - Surgery Scheduling
 - Order Entry
- SAINT Laboratory
 - Laboratory
- SAINT Pharmacy
 - Pharmacy
- SAINT Time and Attendance
 - Time and Attendance
- For Macro SAINT:
 - VAX/SAINT File Manager

SYSTEMS ASSOCIATES, INC.

- In fiscal 1984 SAI generated \$4.1 million in revenue from maintenance and service fees. This represents 20% of total revenue.
- As of July 1984, 200 hospitals are using a total of more than 300 SAINT systems.

INDUSTRY MARKETS

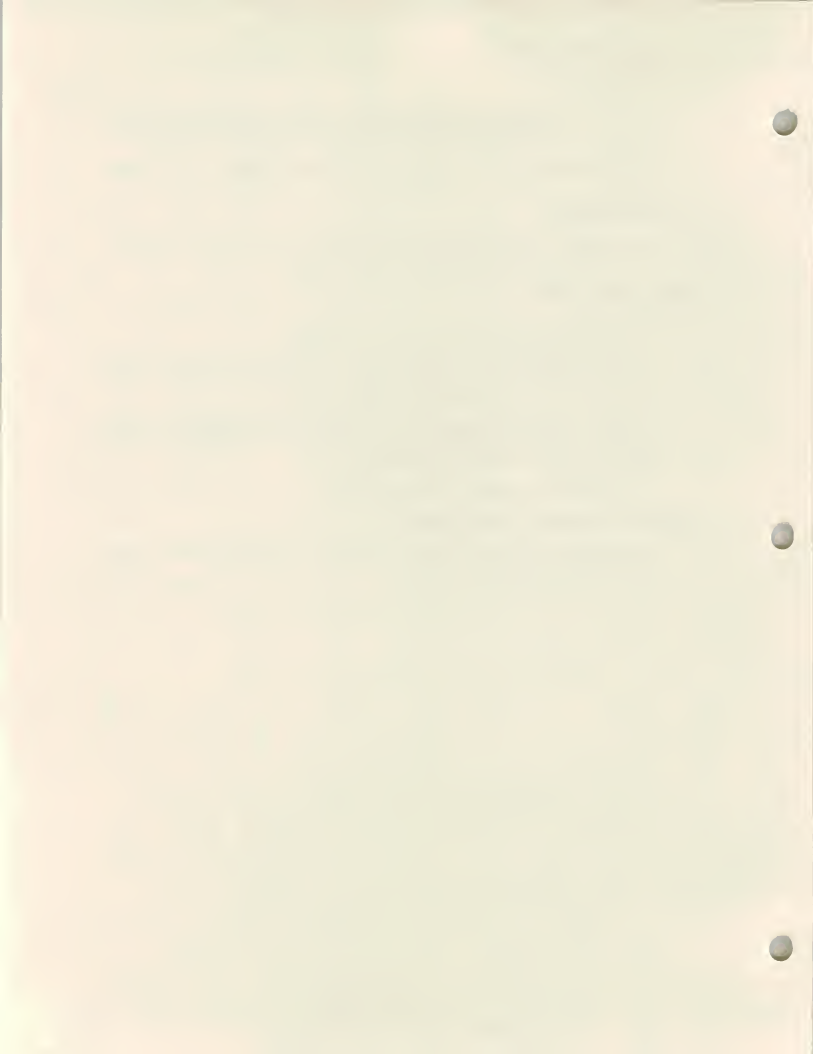
- One hundred percent of SAI's revenue is derived from the hospital industry. Clients include both nonprofit and for-profit hospitals.

GEOGRAPHIC MARKETS

- All of SAI's revenue is derived from U.S. clients.
- SAI has branch offices in Los Angeles, San Francisco, Columbia (MD), Orlando, Arlington (TX), Chicago, Colorado Springs, Atlanta, Bellevue (WA), Boston, Richmond (VA), Shreveport, and Plainsboro (NJ).
- In addition, SAI has field engineering offices in the following locations: Port Hueneme and Sacramento (CA), Seattle and Spokane (WA), Denver, Augusta (GA), Tampa, Washington (DC), and Buffalo.
- SAI is beginning to research foreign markets.

COMPUTER HARDWARE AND SOFTWARE

- Midi SAINT and Macro SAINT are used by SAI at its Corporate Data Center for internal reporting and product development.



COMPANY HIGHLIGHT

SYSTEMS ASSOCIATES, INC.

412 East Boulevard
P.O. Box 36305
Charlotte, NC 28236
(704) 333-1276

John W. Weil, President

Private Corporation

Total Employees: 140

Total Revenue, Fiscal Year End

1/31/82: \$9,500,000

THE COMPANY

- Systems Associates, Inc. (SAI) was founded in 1966 to provide professional services to a variety of industries. In 1974 SAI developed a turnkey system for hospitals, which has become the primary business of the company.
- Fiscal 1982 revenue of \$9.5 million represented an increase of 64% over 1981 revenue of \$5.8 million. Fluctuations in income before taxes and net income are the result of the company's investment in research and development for new applications. A five-year financial summary follows:

SYSTEMS ASSOCIATES, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1/82	1/81	1/80	1/79	1/78
Revenue	\$ 9,500	\$ 5,800	\$ 5,000	\$ 2,300	\$ 1,700
• Percent increase from previous year	64%	16%	117%	35%	31%
Income before taxes	\$ 1,100	\$ 327	\$ 814	\$ 246	\$ 35
• Percent increase (decrease) from previous year	236%	(60%)	231%	603%	(80%)
Net income	\$ 728	\$ 302	\$ 1,082	\$ 318	\$ 310
• Percent increase (decrease) from previous year	141%	(72%)	240%	3%	24%

- The company's principal competitors include mainframe computer manufacturers, such as IBM, Burroughs, and NCR. Other competitors include Shared Medical Systems, MCAUTO, and HBO & Company.

SYSTEMS ASSOCIATES, INC.

- As of June 1982, the company has 140 employees, divided as follows:

Marketing/sales	15
Customer support	75
Development	30
General and administrative	<u>20</u>
	140

KEY PRODUCTS AND SERVICES

- One hundred percent of SAI's revenue is derived from its on-line turnkey hospital system, SAINT®.
 - SAI markets SAINT to hospitals ranging in size from 50 to 427 beds. The average SAI client hospital has 150 beds.
 - SAINT runs on hardware assembled by SAI: 16-bit, 132K words of memory microprocessors with multiple 80 megabyte disk drives.
 - Medical communications applications include:
 - . Pre-admission and admission.
 - . Census and bed control.
 - . Surgery scheduling.
 - . Outpatient registration/billing.
 - . Order entry/communications nursing station.
 - . Results reporting.
 - . Automatic charge capturing.
 - . Laboratory.
 - . Radiology.
 - . Central supply.
 - . Dietary.
 - . Nurse station.
 - Financial management applications include:
 - . Admission, transfer, and discharge.
 - . Census statistics.
 - . Automatic room/board charging.
 - . Inpatient/outpatient billing and reporting.
 - . Demand billing.
 - . Insurance proration and processing.
 - . Accounts receivable management.
 - . General ledger accounting.
 - . Responsibility reporting.
 - . Performance reports by cost center.
 - . Financial indicators analysis.
 - . Payroll and personnel reporting.
 - . Accounts payable.

SYSTEMS ASSOCIATES, INC.

- Optional applications include:
 - . Stepdown cost allocation.
 - . Inventory control.
 - . Fixed asset accounting/preventative maintenance.
 - . Medical records statistics/reporting.
 - . Patient index/history files.
 - . On-line pre-admission/admission.
 - . On-line outpatient registration/billing.
 - . Microfiche output optional reporting.
 - . Medical records index.
 - . Data base management.
 - . Report generator.
- Customer support, software modifications, program debugging, and hardware maintenance services are provided to all SAI clients.
 - Software maintenance and modification is available via 300 and 1200 baud dial-up telephone lines to the Charlotte facility.
 - SAI clients pay a fee for hardware/software maintenance, which is typically 12% of the system purchase price per year.
- Pricing of SAINT varies depending on the size of the hospital and the applications processed.
- As of June 1982 there are SAINT systems installed at over 130 hospitals. Management estimates there will be a total of over 180 systems installed by the end of 1982.

INDUSTRY MARKETS

- One hundred percent of SAI's revenue is derived from the hospital industry.

GEOGRAPHIC MARKETS

- All of SAI's revenue is derived from U.S. clients.
- SAI has branch offices in Arlington (TX), Chicago, Columbia (MD), Los Angeles, Orlando, and San Francisco.

COMPUTER HARDWARE AND SOFTWARE

- Two SAINT systems are installed at Charlotte headquarters for product development.



COMPANY PROFILE

SYSTEMS CENTER, INC.

1800 Alexander Bell Drive
Reston, VA 22091
(703) 264-8000

Robert E. Cook, Chairman, President,
and CEO

Public Corporation, NYSE

Total Employees: 939 (12/91)

Total Revenue, Fiscal Year End

12/31/91: \$125,845,000

The Company

Systems Center, Inc., founded in 1981, markets and supports systems and network management software. The company's products assist in the automation and control of mixed computing environments that include IBM, DEC, Tandem, Fujitsu, Microsoft, and UNIX.

Systems Center currently offers products in the following areas:

- Advanced Systems Management™ products include the NET/MASTER™ family of products for integrating and automating the management of network operations across diverse computing platforms and Network DataMover® products, which provide automated and secure network data transfer among diverse platforms.
- Systems management products support VM systems management, AS/400 systems management, and systems management for heterogeneous UNIX networks.

During 1991, 68% of new license revenues was from products acquired by Systems Center since 1988. A number of transactions were completed during 1990, extending Systems Center's product offerings into additional markets.

- During the first half of 1990, Systems Center acquired the worldwide marketing rights to, and the owner/developer of, the NET/MASTER family of products. Systems Center has since entered into separate development and marketing agreements relating to NET/MASTER products with Tandem, DEC, AT&T, and Fujitsu.
- In August 1990, Systems Center acquired all rights to automated management software for the AS/400 operating system from IME Investments Ltd. of Houston (TX).

- In December 1990, Systems Center acquired UNITECH Software, Inc. of Reston (VA). UNITECH's products address systems management needs for users of UNIX.

Systems Center's 1991 revenue reached \$125.8 million, a 16% increase over 1990 revenue of \$105.5 million. Net income reached \$6.3 million, compared to net losses of \$27.9 million for 1990.

- During 1990, Systems Center recorded one-time charges of \$29.7 million associated with the acquisition of the NET/MASTER and UNIX systems administration product families and the cost of corporate reorganization, which reduced headcount by approximately 15%.
- In the five-year summary that follows, results prior to 1991 have been restated to reflect pooling-of-interests acquisitions made during 1990.

**SYSTEMS CENTER, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	1991	1990	1989	1988	1987
Net revenue	\$125.8	\$105.5	\$78.2	\$59.9	\$41.9
• Percent increase from previous year	16%	18%	31%	43%	N/A
Income (loss) before taxes, extraordinary item, and cumulative effect of accounting change	\$6.6	\$(28.8)	\$15.5	\$12.1	\$8.3
• Percent increase from previous year	*	(a)	28%	46%	N/A
Net income (loss)	\$6.3	\$(27.9)	\$11.9	\$8.8	\$5.3
• Percent increase from previous year	*	*	35%	66%	N/A
Earnings (loss) per share	\$0.55	\$(2.79)	\$1.15	\$0.89	\$0.54
• Percent increase from previous year	*	*	29%	65%	N/A

* Not meaningful

(a) Includes one-time charges totalling \$29.7 million.

Systems Center management attributes 1991 revenue growth to the following:

- Net software product revenues (U.S. and international) increased 16% to \$77.3 million, due primarily to an increase in initial license revenues from the company's Advanced Systems Management products and a smaller increase in initial license revenues from its Systems Software products.
- Results were also impacted by the marketing of NET/MASTER products worldwide for a full year in 1991 versus nine months in 1990.
- These results were partially offset by decreased revenues from relational data base products and reduced royalties resulting from the elimination of NET/MASTER royalty payments and the termination of Systems Center's marketing and licensing agreement with IBM.
- Net product support and enhancement revenues (U.S. and international) increased 24% to \$48.5 million, due primarily to an increase in the installed product base and price increases. A portion of the increase also reflects the full-year impact of NET/MASTER.

Revenue for the three months ending March 31, 1992 reached \$31.1 million, a 15% increase over \$27.0 million for the same period in 1991. Net income of \$17.6 million includes \$17 million from the cumulative effect of the change in accounting for income taxes.

As of December 31, 1991, Systems Center had 939 full-time employees, of which 578 were located in the U.S. and Canada, 198 in Europe, and 163 in Australia, Japan, and Singapore. These employees were segmented as follows:

Marketing	79
Sales	241
Customer services/support	215
Product development	197
Finance and administration	<u>207</u>
	939

Key Products and Services

A three-year summary of source of revenue follows:

**SYSTEMS CENTER, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	1991		1990		1989	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software products	\$77.3	62%	\$66.5	63%	\$56.2	72%
Product support and enhancements	48.5	38%	39.0	37%	22.0	28%
TOTAL	\$125.8	100%	\$105.5	100%	\$78.2	100%

A further breakdown of revenue by product line follows:

**SYSTEMS CENTER, INC.
SOURCE OF REVENUE BY PRODUCT LINE
(\$ millions)**

	FISCAL YEAR					
	1991		1990		1989	
PRODUCT LINE	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Advanced Systems Management products	\$72.3	57%	\$54.0	51%	\$23.9	31%
VM Systems Management products	53.5	43%	47.5	45%	48.6	62%
Relational Data Base products (a)	--	--	4.0	4%	5.7	7%
TOTAL	\$125.8	100%	\$105.5	100%	\$78.2	100%

(a) Includes product lines sold during 1990.

Systems Center currently has over 46,000 component products licensed worldwide. Current product offerings are summarized in the exhibit.

EXHIBIT

SYSTEMS CENTER SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION	YEAR INTRODUCED
Advanced Systems Management Products		
NET/MASTER	Network management system	1984
Network DataMover		
- NDM-MVS	Runs with MVS operating system	1984
- NDM-VSE	Runs with VSE operating system	1986
- NDM-VM	Runs with VM operating system	1988
- NDM-VMS	Runs with VMS operating	1988
- NDM-Tandem	Runs with Tandem Guardian 90	1989
- NDM-PC	Runs with PC-DOS and OS/2	1984
- NDM for AS/400	Runs with AS/400	1990
- NDM-CICS	Optional interface to NDM	1990
Systems Management Products		
<u>VM Products</u>		
VMCENTER II		
- VMBACKUP	Protects data with secondary backup storage	1981
- VMARCHIVE	Manages disk storage	1982
- VMTAPE	Controls, automates, and manages VM tape libraries	1982
- VMSCHEDULE	Work scheduling system	1983
- VMACCOUNT	Resource consumption accounting and reporting	1984
- VMSECURE	Controls access to VM-based data center	1984
- VMSORT	Sorts data based on user-specified sequence	1985
- VMOPERATOR	Enhances interface between VM and operations staff	1986
- VMBATCH	Batch processing system for VM	1986
- VMMONITOR	System performance monitoring tool	1986
VMCENTER II/E	VM systems management for IBM's VM/ESA	1992
VMSPPOOL	Monitors VM spool space	1987
VMDIRECT	Directory management product	1988
NOTEKEEPER	Automates PROFS notelogs management	1990
PROREXX	Compiler for VM REXX programs	1991
<u>AS/400 Products</u>		
AS/CENTER	Automated system management	1990
AS/HUB	Remote AS/400 system management	1991
<u>UNIX Products</u>		
BACKUP.UNET	Automated backup, restore, and media management in multivendor network	1990
PRINT.UNET	Print management for multivendor networks	1991
UCONTROL		
- USECURE	Security management	1987
- UBACKUP	Backup, restore, and storage media management	1986
- UQUEUE	Spooling, batch job scheduling, and queuing	1984

Advanced Systems Management Products:

The Network DataMover products provide data transfer services among mainframes, minicomputers, and personal computers, and also provide for the management of these data transfer services. Versions are available for various operating systems.

NET/MASTER products are an integrated family of network and systems management programs for the management and optimization of multiplatform networks.

- NET/MASTER products are available for MVS/ESA, MVS/XA, MVS/SP, VM, and DOS/VSE IBM operating systems. For Fujitsu systems, NET/MASTER is available for the MSP and FSP operating systems.
- Systems Center has strategic partnering agreements with DEC, Tandem, AT&T, and Fujitsu related to NET/MASTER that will provide their users with access to SNA environments.
- The NET/MASTER family of products include the following:
 - FOUNDATION is the base system that incorporates a fourth-generation language, operator control, user access maintenance, and intersystem communications.
 - NET/MASTER automates network operations across a variety of platforms, increases network availability, automates help desk procedures, and improves end-user service levels
 - SYS/MASTER automates console operations, including screening console messages or commands and providing remote systems and console management capabilities.
 - INFO/MASTER supports problem, change, and configuration management of networked systems.
 - ACCESS MANAGEMENT SOLUTION enhances network security and session management.
 - The Unified Network Management Application integrates SNA network management with the AT&T Accumaster Integrator network management product.
 - REMOTE SYSTEM EXECUTIVE is a PC-based product that allows remote communications between a PC and the hardware or system consoles of an IBM or compatible mainframe.

- NET/MASTER products scheduled for introduction during 1992 include the following:
 - NET/MONITOR is an intuitive, multi-color graphical user interface based on IBM's OS/2 Extended Edition Presentation Manager platform.
 - Systems Center plans to deliver prepackaged systems management products in the areas of automation LAN management, and problem, change, configuration, and asset management that will replace the SYS/MASTER and INFO/MASTER toolkits that require customization to be installed for each customer.
 - New connectivity products are being developed for DEC and Tandem environments.
- NET/MASTER is installed at over 2,000 sites in over 30 countries.

Systems Management Products:

Systems Center currently markets systems management products for IBM's VM operating system, the IBM AS/400, and multivendor UNIX systems and networks.

The VM products perform functions ranging from data security and storage management to resource consumption accounting and workload scheduling.

- VMCENTER II is Systems Center's integrated system that consists of a family of 10 products, which can be licensed together or separately, designed for IBM and compatible mainframes and IBM's 9370 computers running VM.
- VM CENTER II/E is a new product for IBM's VM/ESA operating environment.

Systems Center currently offers two systems management software products for the IBM AS/400 and anticipates expansion of the AS/400 product line.

Support Services:

Product support and maintenance services, including problem resolution and assistance in product installation, are provided primarily by 24-hour telephone access. With the exception of the Network DataMover and NET/MASTER products, no on-site support to system software product (VM, AS/400, UNIX) customers is provided because the products can be installed and operated by the customer with telephone support.

A separate professional services group makes training, installation support, and customer software solutions based on Systems Center's products available to customers.

Industry Markets

Systems Center's customers include top Fortune companies, manufacturers, financial institutions, oil companies, educational institutions, airlines, government agencies, and many other types of organizations.

In addition to direct sales and telesales programs, Systems Center has established a Federal Government Marketing group to license all products to the U.S. federal government; a Major Accounts Group to target certain accounts and industries; and a Value Added Sales Group for all product licensing through value-added resellers and distributors.

Geographic Markets

Approximately 45% of Systems Center's 1991 revenue was derived from the U.S. and Canada, 37% from Europe, and 18% from other international sources. The company's products are marketed in over 60 countries.

A three-year summary of source of revenue follows:

**SYSTEMS CENTER, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1991		1990		1989	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S. and Canada	\$56.7	45%	\$53.8	51%	\$52.2	67%
Europe	46.8	37%	36.4	34%	17.2	22%
Other (a)	22.3	18%	15.3	15%	8.8	11%
TOTAL	\$125.8	100%	\$105.5	100%	\$78.2	100%

(a) Includes certain independent agents and Systems Center Pacific subsidiaries.

Systems Center markets some of its management products in North America by telephone from its headquarters. During the past three years, the company has established direct sales operations in addition to the teleselling approach used to market its VM, AS/400, and UNIX management products.

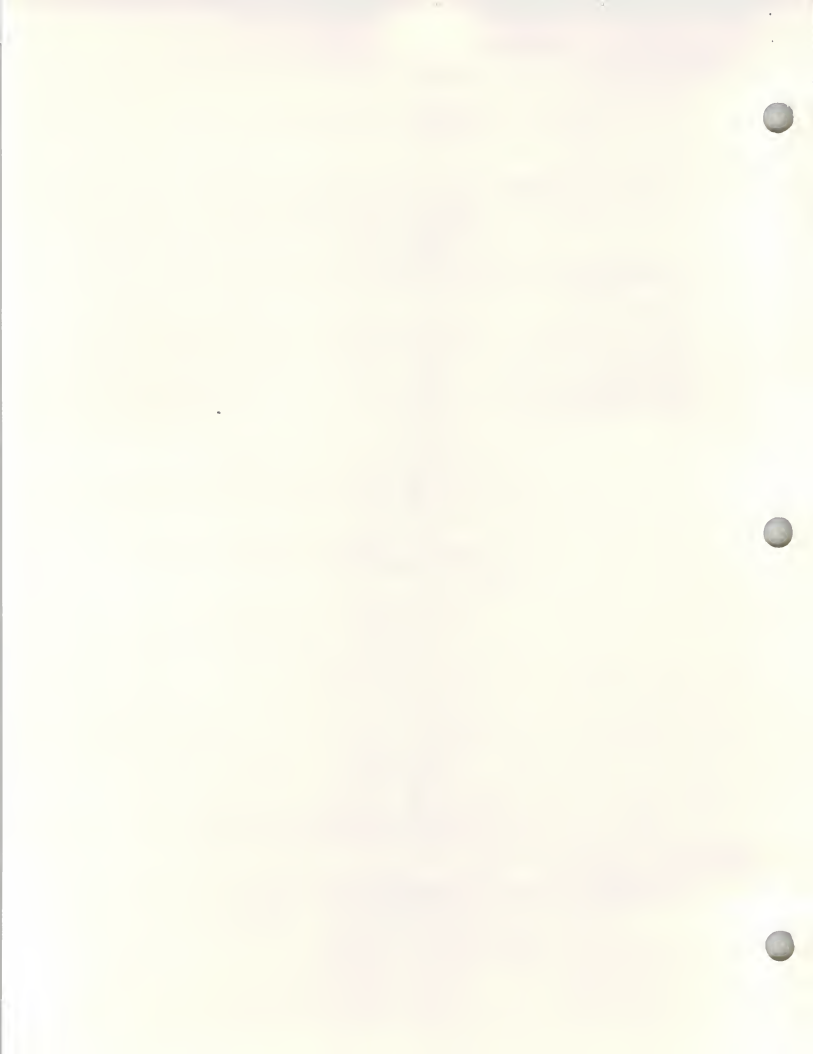
The Advanced Systems Management products are marketed throughout North America through 18 branch and regional sales offices in 17 cities.

- North American offices are in Atlanta, Boston, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Houston, Los Angeles, Minneapolis, New York, Orlando, Reston, Sacramento, San Francisco, St. Louis, and Toronto.

Direct sales in Northern and Western Europe are managed by wholly owned subsidiaries in the U.K., France, Germany, Sweden, Switzerland, and Belgium. Direct sales operations are supported from 17 European branch and subsidiary sales offices.

Direct sales operations in Australia, Japan, and New Zealand are managed by Systems Center's subsidiary in Australia. Offices are in Sydney, Melbourne, and Perth (Australia) and Wellington (New Zealand).

Worldwide agent sales operations are managed by Systems Center's international agent operations, the major components of which are conducted from Reston, a branch office in Monaco, and a wholly owned subsidiary in Singapore.



COMPANY PROFILE

SYSTEMS CENTER, INC.

1800 Alexander Bell Drive
Reston, VA 22091
(703) 264-8000

Robert E. Cook, Chairman and CEO
Public Corporation, NYSE

Total Employees: 850 (12/90)
Total Revenue, Fiscal Year End
12/31/89: \$76,886,000

The Company

Systems Center, Inc. develops and markets systems and network software for mixed environments. The company's network software products automate and streamline network operations across multiple hardware and software platforms. Its systems software products simplify the management of data center operations.

Recent acquisitions made by Systems Center include the following:

- In March 1990, Systems Center acquired the worldwide (excluding Australia and New Zealand) marketing rights of the NET/MASTER network management system software product family from Cincom Systems for approximately \$43.5 million.
- The acquisition included the rights to employ approximately 130 employees of Cincom who were previously employed in the NET/MASTER business.
- For the fiscal year ending September 30, 1989, Cincom Systems reported revenue of approximately \$26.6 million from the NET/MASTER product line.
- In June 1990, Systems Center acquired Software Developments International Pty. Limited (SDI) of Chatswood, New South Wales, for approximately 1.9 million shares of Systems Center common stock and approximately \$3.3 million in cash.
- SDI, developer of the NET/MASTER product family, had approximately 88 employees at the time of the acquisition and 1989 revenue of approximately \$10.6 million (U.S.).
- The acquisition has been accounted for as a pooling of interests.

- In August 1990, Systems Center acquired all rights to automated management software for the AS/400 operating system from IME Investments Ltd. of Houston (TX) for \$1 million in cash, \$1 million in Systems Center common stock, and an estimated \$500,000 in additional payments based on future revenues.
- In December 1990, Systems Center acquired UNITECH Software, Inc. of Reston (VA) for 347,680 shares of Systems Center common stock valued at \$3.5 million.
 - UNITECH, founded in 1985, provides UNIX systems utilities and network administrative software products. The company has over 300 customers at 2,000 sites, with a strong presence in the federal government.
 - UNITECH's year-end revenues through May 31, 1990 were approximately \$1.5 million and estimated calendar 1990 revenues are \$2 million.
 - The acquisition will be accounted for as a pooling of interests.

Systems Center recently divested its relational data base software business in order to focus on its core business of network and systems software products.

- In October 1990, Systems Center finalized the sale of its DB2 relational data base software product line to On-Line Software International, Inc. in a transaction valued at \$5.25 million.
 - The sale involved Systems Center's DB/SECURE and DB/OPTIMIZER products (originally acquired with DB View, Inc. in early 1989) and DB/AUDITOR and DB/REORGANIZER.
 - Systems Center recognized an after tax gain of \$702,000 from the sale for the quarter ending September 30, 1990.
- Also in October 1990, Systems Center announced the sale of its SQL/DS relational data base software products to VM Systems Group of Vienna (VA) in a transaction valued at between \$1.2 and \$1.5 million.

Revenue for the nine months ending September 30, 1990 reached \$67.8 million, a 34% increase over \$50.5 million for the same period in 1989. Net losses were \$2.4 million, compared to net income of \$6.4 million for the same period a year ago.

- Results for 1989 have been restated to reflect the pooling-of-interests acquisition of SDI in June 1990.
- Net losses for the period include a one-time pretax charge of approximately \$3 million for costs associated with the purchase of the NET/MASTER products.

In the five-year summary that follows, financials have been restated to reflect the pooling-of-interests acquisition of SDI in June 1990.

**SYSTEMS CENTER, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	1989	1988	1987	1986	1985
Net revenue	\$76.9	\$59.1	\$41.3	\$34.3	\$21.2
• Percent increase from previous year	30%	43%	20%	62%	80%
Income before taxes, extraordinary item, and cumulative effect of accounting change	\$15.8	\$12.5	\$8.9	\$9.6	\$4.0
• Percent increase (decrease) from previous year	26%	40%	(7%)	140%	282%
Net income	\$12.2	\$9.3	\$5.9	\$5.7	\$1.3
• Percent increase (decrease) from previous year	31%	58%	4%	338%	136%
Earnings per share	\$1.21	\$0.96	\$0.62	\$0.61	\$0.15
• Percent increase (decrease) from previous year	26%	55%	2%	307%	122%

Systems Center management attributes 1989 revenue growth to the following:

- Net software product revenues (U.S. and international) increased 26% (\$11.3 million) during 1989.
- Net product support and enhancement revenues (U.S. and international) increased 42% (\$6.4 million) during 1989 due to an increase in the number of installed products.

Systems Center has an agreement with IBM (amended to expire in 1991) granting to IBM a worldwide, nonexclusive right to license Systems Center's VMBACKUP, VMARCHIVE, and VMTAPE software products and provide support for customers who have licensed these products from IBM. Royalties received by Systems Center under this agreement were approximately \$1.8 million, \$1.4 million, and \$1.1 million for 1989, 1988, and 1987, respectively.

As of December 31, 1989, Systems Center had 498 employees, of which 343 were located in the U.S. and 155 were located in Europe. The company currently has approximately 850 employees.

Key Products and Services

A three-year summary of source of revenue follows:

SYSTEMS CENTER, INC. THREE-YEAR SOURCE OF REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR					
	1989		1988		1987	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software products	\$55.0	72%	\$43.7	74%	\$30.4	74%
Product support and enhancements	21.9	28%	15.4	26%	10.9	26%
TOTAL	\$76.9	100%	\$59.1	100%	\$41.3	100%

A further breakdown of restated 1989 revenue follows:

ITEM	REVENUE \$ MILLIONS	PERCENT OF TOTAL
Software product licenses		
• VM Software		
Domestic	\$22.4	29%
International	12.6	17%
	\$35.0	46%
• Network Products		
Domestic licenses	\$11.1	14%
International licenses	7.0	9%
	\$18.1	23%
• Relational Database		
Domestic licenses	\$1.5	2%
International licenses	0.4	1%
	\$1.9	3%
Subtotal	\$55.0	72%
Product support and enhancement services		
Domestic	\$15.8	20%
International	6.1	8%
Subtotal	\$21.9	28%
TOTAL	\$76.9	100%

Systems Center's current product offerings are summarized in the exhibit.

- As the result of acquisitions made during the year, the company currently has over 32,000 products installed worldwide. As of December 31, 1989, Systems Center had approximately 28,000 products installed worldwide, compared to 23,300 at the end of 1988, and 17,600 at the end of 1987.
- The fees for licenses of the Systems Software, NET/MASTER, and Network DataMover products are based on processor size.

Systems Software Products:

Systems Center's products allow users of IBM's VM operating system to manage and control their data processing resources and services more efficiently.

- VMCENTER II is Systems Center's integrated system that consists of a family of 10 products for use with IBM's VM operating system. The products are designed to enhance the control, productivity, and security of a customer's data processing resources.

EXHIBIT

SYSTEMS CENTER SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION	YEAR INTRODUCED
Systems Software Products		
<u>VM Products</u>		
VMCENTER II		
- VMBACKUP	Protects data with secondary backup storage	1981
- VMARCHIVE	Manages disk storage	1982
- VMTAPE	Controls, automates, and manages VM tape libraries	1982
- VMSCHEDULE	Work scheduling system	1983
- VMACCOUNT	Resource consumption accounting and reporting	1984
- VMSECURE	Controls access to VM-based data center	1984
- VMSORT	Sorts data based on user-specified sequence	1985
- VMOperator	Enhances interface between VM and operations staff	1986
- VMBATCH	Batch processing system for VM	1986
- VMMONITOR	System performance monitoring tool	1986
VMSPPOOL	Monitors VM spool space	1987
VMDIRECT	Directory management product	1988
CADBACK	Backs up and restores CATIA and CADAM VM files	1990
NoteKeeper	Automates PROFS notelog management	1990
<u>AS/400 Products</u>		
AS/CENTER	Automated system management	1990
<u>UNIX Products</u>		
BACKUP.UNET	Backs up in a networked multivendor environment	1990
UCONTROL		
- USECURE	Security management	1987
- UBACKUP	Backup, restore, and storage media management	1986
- UQUEUE	Spooling, batch job scheduling, and queuing	1984
Network Products		
NET/MASTER	Network management system	1984
<u>Network DataMover</u>		
- NDM-MVS	Runs with MVS operating system	1984
- NDM-VSE	Runs with VSE operating system	1986
- NDM-VM	Runs with VM operating system	1988
- NDM-VMS	Runs with VMS operating	1988
- NDM-Tandem	Runs with Tandem Guardian 90	1989
- NDM-PC	Runs with PC-DOS	1984
- NDM-400	Runs with AS/400	1990
- NDM-CICS	Optional interface to NDM	1990

- The products, which can be licensed together or separately, are designed for IBM and compatible mainframes and IBM's 9370 computers running VM.
- Systems Center also markets VMCENTER, an integrated product that includes VMBACKUP, VMARCHIVE, VMTAPE, VMSCHEDULE, VMACCOUNT, VMSECURE, and VMSORT.

Network Products:

NET/MASTER is a family of software modules for the management and optimization of SNA networks. NET/MASTER is designed to operate on IBM and close compatible mainframes.

- NET/MASTER is available for MVS/ESA, MVS/XA, MVS/SP, VM, DOS/VSE IBM operating systems. For Fujitsu systems, it is available for the MSP and FSP operating systems.
- Pricing is based on a CPU group basis.
- NET/MASTER is installed at over 2,000 sites in over 30 countries.
- Systems Center has strategic partnering agreements with DEC, Tandem, and AT&T related to NET/MASTER that will enable their users access into SNA environments.

The Network DataMover family of data movement software products facilitate the movement of files among multiple computers and operating environments. Versions are available for various operating systems.

Product support, including problem resolution and assistance in product installation, is provided primarily by 24-hour telephone access. With the exception of the Network DataMover and NET/MASTER products, no on-site support to customers is provided because the products can be installed and operated by the customer with telephone support.

Industry Markets

Systems Center's customers include top Fortune companies, manufacturers, financial institutions, oil companies, educational institutions, and government agencies.

**Geographic
Markets**

Approximately 66% of Systems Center's restated 1989 revenue was derived from the U.S. and Canada. The remaining 34% of revenue was derived from international sources, primarily Europe. The company's products are marketed in over 55 countries.

A three-year summary of source of revenue follows:

**SYSTEMS CENTER, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1989		1988		1987	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S. and Canada	\$50.9	66%	\$38.8	66%	\$29.7	72%
Europe	17.2	22%	14.3	24%	8.1	20%
Other	8.8	12%	6.0	10%	3.5	8%
TOTAL	\$76.9	100%	\$59.1	100%	\$41.3	100%

Since its inception, the company has marketed its Systems Software products in North America primarily by telephone from its headquarters.

The Network DataMover and NET/MASTER products are marketed through a direct sales force in the U.S. and Canada, 40 offices in 16 countries, and agent representation in another 25 countries.

Systems Center has regional sales offices in Atlanta (GA), Chicago (IL), Cincinnati (OH), Irving (TX), New York (NY), Reston (VA), San Mateo (CA), Southfield (MI), Waltham (MA), West Caldwell (NJ), and Westport (CT). Telephone sales are used to supplement these direct-marketing efforts.

International subsidiaries are located in the U.K., Belgium, The Netherlands, Germany, Sweden, Japan, and France. Systems Center also has marketing agreements with independent foreign agents in 35 to 40 additional foreign countries.

COMPANY HIGHLIGHT

SYSTEMS CONSULTANTS INC. (SYSCON)

1054 31st Street, N.W.
Washington, D.C. 20007
(202) 342-4000

Jose J. Yglesias, President
Private Corporation
Total Employees: 1,450
Total Revenues, Fiscal Year End
11/30/80: \$52,500,000
Computer Services Revenues:
\$46,000,000

PRINCIPAL BUSINESS Systems Consultants Inc. (Syscon) specializes in Department of Defense related systems engineering and software services. Approximately 88% of its total business is computer services.

FINANCIALS (\$ thousands)

	11/80	11/79	11/78	11/77	11/76
- Total revenues	\$52,500	\$44,000	\$33,000	\$26,000	\$20,000
- Computer services revenues	\$46,000	\$42,000	\$31,000	\$25,000	\$19,000
- Syscon management expects total FY 1981 revenues to reach \$68,000,000.					

SOURCES OF COMPUTER SERVICES REVENUE

- 99% Professional services.
 - . Approximately 29% of Syscon's computer services revenues come from software validation and verification.
- 1% Turnkey systems, software products and processing services.

PRODUCTS AND SERVICES

- Syscon's professional service specialty is the design and development of shipbased combat weapons systems. The company supplies Department of Defense agencies with systems engineering services, systems software design and computer analysis. Examples of current contracts include:
 - . An \$11 million contract over three years with the Navy. Syscon provides software design and systems integration for the Navy's Versatile Training System.
 - . Technical writing, documentation and software services for various computer simulation systems for the U.S. Navy in Vallejo, CA. This contract is worth approximately \$3 million over three years.

SYSTEMS CONSULTANTS INC. (SYSCON)

- The validation and verification of Navy developed Standard Automated Financial System (STAFS). This four-year contract is also worth about \$3 million.
- A three-year \$1 million contract with the Ames Research Center. Syscon provides systems effectiveness control and quality assurance testing.
- Approximately one percent of Syscon's current computer services revenues come from software products, processing services and turnkey systems. Syscon management expects these services will contribute about 10% in 1981.
- Syscon offers an automatic meter reader and billing system for water districts. Customers have the option of:
 - Buying the proprietary software package, called On-Line Billing Information System (OBIS), for \$7,500. OBIS runs on PDP 1100 Series equipment with RSTS/E operating system.
 - Electing to use OBIS on an interactive basis via telephone grade lines to a Syscon data center. Syscon currently has two processing clients which serve 14 water districts.
 - Acquiring the billing system as a turnkey system based on the DEC PDP 11/23. The OBIS turnkey system sells for approximately \$50,000. There are no installations to date.
- Syscon currently has one test installation of Predict, a hardware quality assurance software system for manufacturing companies. Also based on the DEC PDP 11/23, this product will sell for \$15,000. Pilot marketing is scheduled to be completed in April 1981.
- Five municipal clients process their internal taxes from Syscon's Newport, RI, data center and its COMTASS software. COMTASS operates interactively on an HP3000.
- There are two installations of the Financial Management System (FMS) and Personnel/Payroll Management System (PPMS). These software packages cost \$15,000 each and are written in COBOL for Prime MP 3000s. Clients have the option of using this software from Syscon's data centers.

INDUSTRY MARKETS The Federal Government and local municipalities account for approximately 90% of Syscon's revenues. The remaining 10% come from private industry (primarily manufacturers and utility companies).

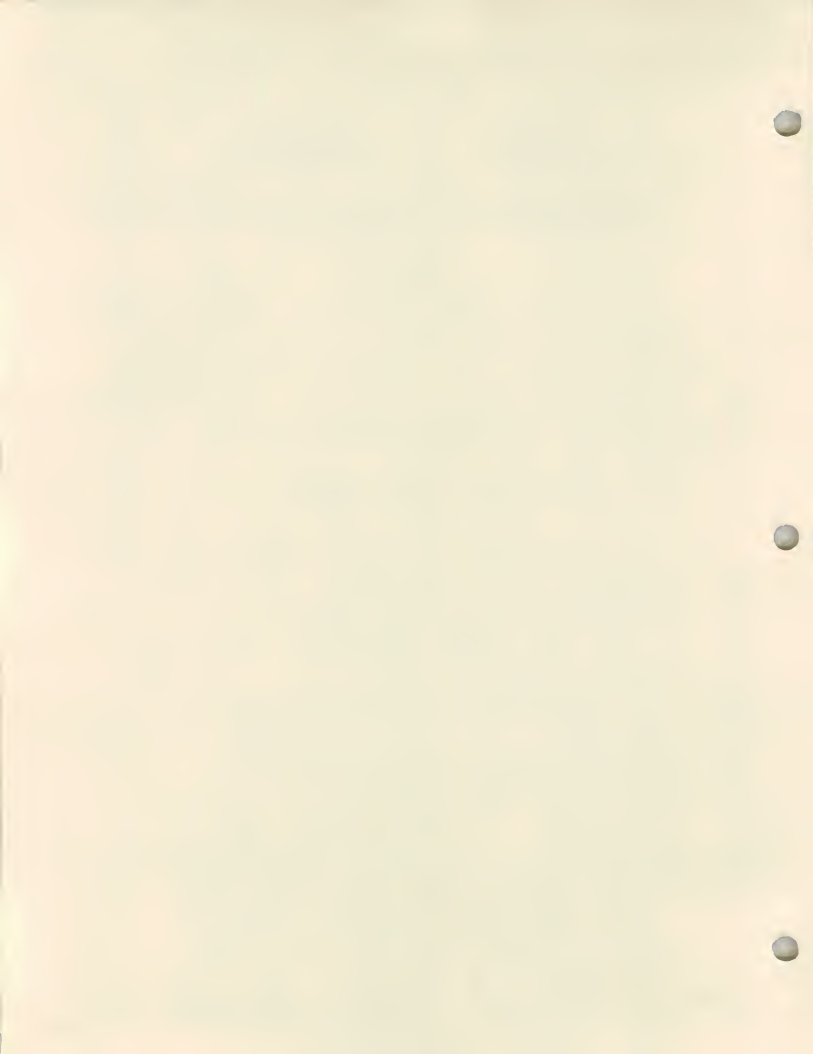
GEOGRAPHIC MARKETS One hundred percent of Systems Consultants Inc.'s revenues come from the U.S.

COMPUTER HARDWARE AND SOFTWARE

- Systems Consultants Inc. has equipment in data centers in the following cities:

SYSTEMS CONSULTANTS INC. (SYSCON)

- . Van Nuys, CA I DEC PDP 11/23
 - . Sunnyvale, CA I DEC PDP 11/34
 - . Ridgecrest, CA I DEC PDP 11/40
 - . Newport, RI I HP 3000
- Equipment is accessed via leased lines. There is no network linking the data centers at present.



COMPANY HIGHLIGHT

SYSTEMS CONSULTANTS, INC.

1054 31st Street NW
Washington, DC 20007
(202) 342-4000

Jose J. Yolesyas, President
Private Corporation
Total Employees: 1,200
Total Revenues, Fiscal Year End
11/30/78: \$40 million*
Computer Services Revenues:
\$38 million*

THE COMPANY

- Systems Consultants, Inc. (SCI) was founded in 1966 as a contract programming services firm. Professional services still constitute the majority of its revenues.
- SCI's estimated 1978 revenues were \$40 million. Revenue figures for 1977 were not available, but the 1978 figure does show a significant increase over previously reported revenues of \$27 million in 1976.
- SCI presently has four operating groups:
 - Systems Engineering Group: design, integration, and installation of large computer systems, including planning, testing, and support.
 - Management Systems Group: provides information training, planning, and analysis for management decision making.
 - Computer Sciences and Technology Group: small system design, implementation, and support.
 - Publication Services Group: complete word processing, phototype-setting, printing, binding, technical writing, and technical instruction.
- The companies 1,200 employees are segmented as follows:

- Marketing	10
- Programmers/Analysts	1,090
- Administrative	100
	1,200
- SCI has developed a good reputation for providing a wide variety of technical and scientific development work in both the military and civil/commercial areas. Primary competitors of SCI include: Computer Sciences Corporation, Planning Research, System Development Corporation, and Science Applications, Inc.

* INPUT estimate

COMPANY HIGHLIGHT/SYSTEMS CONSULTANTS, INC.

KEY PRODUCTS AND SERVICES

- SCI's revenues are derived almost exclusively from professional consulting services. Approximately 5% of its revenues come from publication services.
- SCI's largest single customer is the Department of Defense. Revenues from agencies within DOD approached \$32 million in 1978, approximately 80% of total company revenues.
 - Primary focus of their professional services revenues was in support of contracts with the U.S. Navy.
 - The company's strongest area of expertise is in the design and development of software in support of a variety of weapon, fire-control, intelligence, and command systems.
- Approximately 20% of SCI's computer services revenues are derived from non-DOD federal agencies and companies in the manufacturing, insurance, banking, and services industries.
 - Consulting services provided to these industry sectors include the analysis, design, development and testing of custom software and systems.
 - Specific application experience includes systems for criminal justice, data acquisition, data base management, energy, minerals resource planning, postal systems, and water resources planning.

INDUSTRY MARKETS

- Approximate estimates of SCI's industry markets follows:

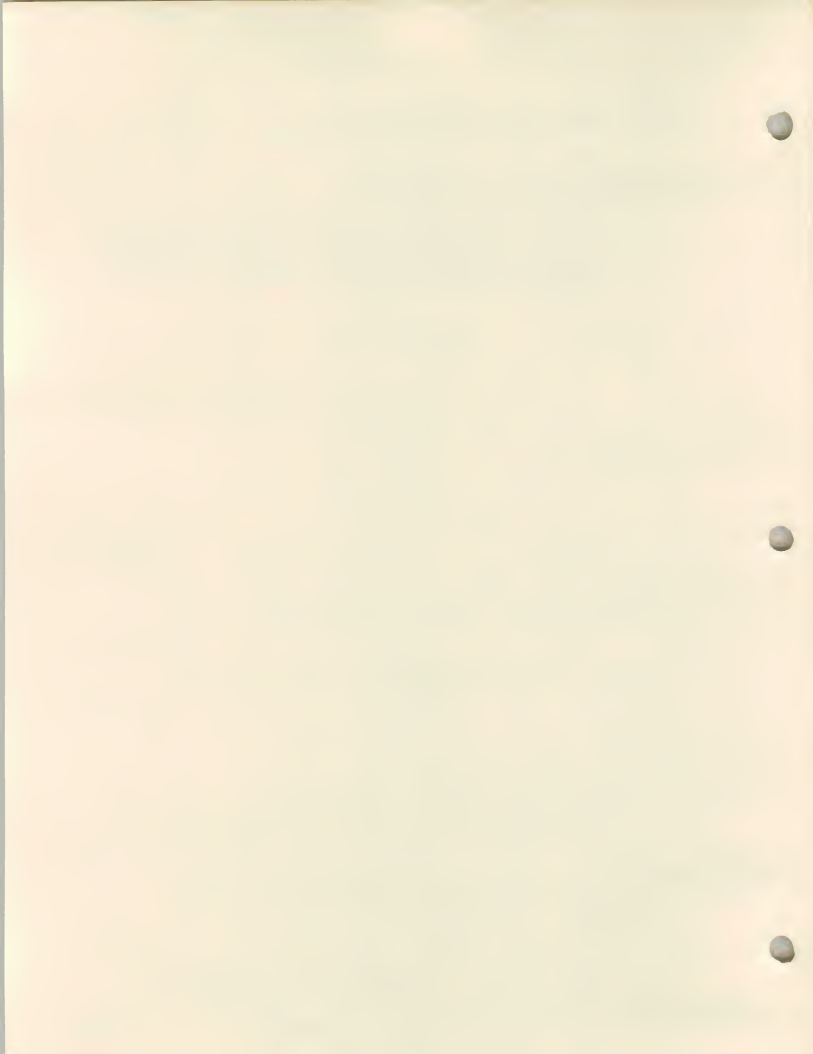
- Federal Government	80%
- Manufacturing	5
- Utilities	5
- Banking and finance	5
- Insurance	5
	100%

GEOGRAPHIC MARKETS

- Eighty percent of SCI revenues come from the South Atlantic states, 10% from the Pacific region, and the remainder is fairly evenly divided throughout other regions of the U.S.

COMPANY HIGHLIGHT/SYSTEMS CONSULTANTS, INC.

- Offices are located in the following cities:
 - Arlington, VA; Baton Rouge, LA; Colorado Springs, CO; Dayton, OH; Emeryville, CA; Eureka, CA; Honolulu, HI; Middletown, RI; Mt. Laurel, NJ; Oxnard, CA; Poulsbo, WA; Ridgecrest, CA; St. Petersburg, FL; San Diego, CA; Springfield, VA; Sunnyvale, CA; Vallejo, CA; Virginia Beach, VA; Washington, DC.



Dropped
Gary W. Burdette
Mkt Mgr

COMPANY HIGHLIGHT

SYSTEMS ENGINEERING COMPUTER CO.
6600 West Broad Street
Richmond, VA 23230
(804) 281-6456

John F. Noll, President
Wholly owned subsidiary of a
Division of the Continental
Group, Inc.
Total employees: under 200
Total revenues, fiscal year end
12/31/76: \$6,200,000

THE COMPANY

- Systems Engineering Computer Company (SEC) was formed in 1966 to provide professional services to a variety of clients. In 1972, it was acquired by the Richmond Corporation, a financial and insurance conglomerate. The Richmond Corporation (now the Richmond Company) was acquired by the Continental Group, Inc. in June 1977.
- SEC revenues of \$6.2 million for FY 1976 increased 19% over \$5.2 million in 1975. Earnings during the same period increased 129% to \$320,000 from \$140,000. The largest contributor to the 1976 increase was SEC's professional services group which showed a gain of 12% in revenues and 20% in profits. FY 1977 revenues are expected to reach \$7 million.
- The acquisitions of Automated Computer Services, Inc. and Old Dominion Microfilm Laboratories in 1977 added data processing and microfilm to SEC's product offerings. SEC also offers remote computing, software products, and turnkey systems to its approximately 300 clients.
- SEC's employees are distributed by function as follows (percentages are approximate):

Operations	50%
Computer Services	40%
Marketing	5%
Administration	5%
	<u>100%</u>

KEY PRODUCTS AND SERVICES

- SEC revenues are distributed fairly evenly among all its products and services - data processing, professional services, software products, turnkey systems, and micrographics. The parent, Richmond Company, accounts for approximately 40% of total revenues.

COMPANY HIGHLIGHT/SYSTEMS ENGINEERING COMPUTER CO.

- Data processing services are available through both SEC's subsidiary Automated Computer Services (ACS) and SEC's Data Center Division.
 - ACS provides five industries with batch processing for general business and specialty applications. The industries are retail distribution (fuel oil jobbers and retail cooperatives), utilities (electric cooperatives), financial (credit unions), and real estate (property managers). Data entry is key to tape via users' on-site intelligent CRTs and on-line specialty terminals.
 - The Data Center offers batch and remote batch processing and interactive remote computing services for general business and utility applications.
- Professional services include consulting, systems design, and programming. Systems evaluation and analysis are also offered.
- Software products are generally low-cost modular packages with little or no customization available. Key products are the SEC Fixed Asset Depreciation System and the General Ledger/Budgeting System.
- Turnkey systems are minicomputer-based general business systems offering general ledger, payroll, accounts receivable, invoicing, order entry, and inventory control applications. The software is created and maintained by SEC. The minicomputer is from Basic/Four. The hardware maintenance is provided by SEC via subcontracts with Sorbus, a third party maintenance organization and sister company of Basic/Four. SEC also OEM's DEC and Data General minicomputers.
- Micrographics, offered through SEC's Old Dominion Microfilm Laboratories (ODML), includes document filming, microfilm, computer output microfilm, and microfiche. Microfilm, COM equipment, and COM film are also available from ODML.

APPLICATIONS SEC offers primarily utility and specialty services and some general business services.

INDUSTRY MARKETS SEC's more than 300 users are derived from manufacturing, distribution, insurance, finance, government, transportation, services, and education. In addition, approximately 40% of revenues are derived from the Richmond Company.

COMPANY HIGHLIGHT/SYSTEMS ENGINEERING COMPUTER CO.

GEOGRAPHIC MARKETS

- SEC customers are concentrated in the Northeast, Southeast, and North Central regions of the U.S.
- The central data center is in Richmond, VA and the regional data center in Chicago.
- Branch offices are in Richmond, VA; Raleigh, NC; Arlington, VA; and Des Plaines, IL.

COMPUTER HARDWARE AND SOFTWARE

- SEC has a variety of mainframe equipment at its Richmond data center, as shown below:
 - 2 IBM 370/145s
 - 1 IBM 360/20
 - 1 IBM 370/125
 - 1 CDC 916
 - 1 HIS 200
 - 1 HIS 6610
- In addition, one HIS 2020 is located in Chicago.
- Terminals on the network include approximately 300 Sycor 340 intelligent CRTs and other IBM 3270-equivalent CRTs, 10 Bunker Ramo 2000 series teller terminals, and 20 to 30 NCR and Singer Point of Sale terminals.
- The network primarily consists of 2000 and 2400 baud leased lines.



COMPANY PROFILE

SYSTEMS MANAGEMENT, INC.
6300 North River Road
Rosemont, IL 60018
(312) 698-4000

William J. Bresnahan, President
Private Corporation
Total Employees: 115
Total Revenue, Fiscal Year End
6/30/85: \$17,500,000
Computer Services Revenue:
\$15,000,000*

THE COMPANY

- Systems Management, Inc. (SMI), incorporated in 1969, develops, markets, and supports systems and application software products and turnkey systems, and provides related professional services. The company is also a distributor for various hardware manufacturers and a Value Added Remarketer (VAR) for IBM.
- Revenue for fiscal 1985 reached \$17.5 million, a 52% increase over \$11.5 million for fiscal 1984. A three-year revenue summary follows:

SYSTEMS MANAGEMENT, INC.
THREE-YEAR REVENUE SUMMARY
(\$ thousands)

ITEM	FISCAL YEAR		
	6/85	6/84	6/83
Revenue	\$17,500	\$11,523	\$9,451
• Percent increase (decrease) from previous year	52%	22%	(7%)

- In August 1985 SMI sold the rights to its ROADS application software product to Ultimate Computer Company. Terms of the sale were not disclosed.
 - ROADS, designed for the truck dealer industry, consists of general accounting, leasing, parts, and service department features to track sales, inventory, and labor. The product runs under the PICK operating system.
 - As a result of the sale, SMI closed its Grand Prairie (TX) office.

*INPUT estimate

SYSTEMS MANAGEMENT, INC.

- As of June 1985 SMI had approximately 115 employees. The company currently has approximately 85 employees, segmented as follows:

Marketing/sales and administration	25
Technical, diagnostic, and customer support	<u>60</u>
	85

- SMI considers its major competition to come from ASK Computer Systems, Management Science America, and Software International (GEISCO).

KEY PRODUCTS AND SERVICES

- INPUT estimates SMI's fiscal 1985 revenue was derived as follows:

Turnkey systems	60%
Software products	15
Professional services	10
Hardware sales	<u>15</u>
	100%

- SMI is a member of IBM's Super Value Added Remarketer (VAR) distribution program and is the only VAR licensed to implement PICK Systems' PICK[®] Operating System on IBM 43XX and Extended Architecture (XA) computers. SMI has developed two implementations of the PICK Operating System.
 - The SMI PICK[®] /370 Operating System^{T.M.}, first released in 1983, is SMI's implementation of the PICK Operating System for IBM 43XX and 30XX computers running under VM.
 - The system can either support ASCII terminals by using a Series/I front-end processor or an existing IBM 3270 EBCDIC terminal network.
 - The SMI PICK/370 Operating System is available to clients as part of an IBM 43XX or 30XX system supplied by SMI or may be licensed from SMI for installation on a client's existing in-house computer.
 - The SMI PICK/370 Operating System is currently installed at over 50 sites.
 - Product licenses vary according to hardware configurations and generally range from \$50,000 to \$100,000.
 - In June 1985 SMI announced PICK/XA, an implementation of the PICK Operating System for IBM's XA computers.

SYSTEMS MANAGEMENT, INC.

- PICK/XA allows IBM mainframes to use up to 2 Gbytes of virtual and real storage and an increased number of input/output channels.
- PICK/XA runs as a guest operating system under IBM's VM/XA host operating system on any XA computer, including the 4381, 308X, and 309X.
- PICK/XA will support all peripheral devices supported by VM/XA, as well as RSCS and SNA (ACF/VTAM).
- PICK/XA is compatible with SMI PICK/370 Operating System programs and data files and PICK/370 users can upgrade to PICK/XA without any conversion procedures.
- PICK/XA is scheduled for release in late 1985.
- SMI markets its operating systems with its internally developed language, Real-Time Processor Language (RPL).
- Support packages for word processing, graphics, and financial modeling are also available to licensees of SMI's operating systems.
- SMI develops, markets, and supports on-line application software products that are sold both as separate packages or integrated with hardware as turnkey systems.
 - All software packages are written in SMI's proprietary language, RPL, and run on any computer that will support the PICK operating system, including IBM Series 1, 43XX, 30XX, and CS9000; Honeywell DPS/Ulimate; Digital LSI-11/Ulimate; and CIE Systems 680 Series computers.
 - Turnkey systems, combining SMI software and IBM or Ultimate computers, range in price from \$20,000 to \$1 million.
 - All hardware maintenance support for the turnkey systems is performed by the manufacturers. SMI provides software maintenance for the operating systems, application software, and its proprietary language, RPL.
 - Application software products include:
 - Business Control Programs (BCP), SMI's top selling application products, are designed to support the wholesaler/distributor who has from one to over 900 distribution points. BCP modules may operate independently or as part of an integrated system.

SYSTEMS MANAGEMENT, INC.

- BCP modules include:
 - . Finished Goods Inventory.
 - . Order Entry.
 - . Billing/Commission Accounting.
 - . Accounts Receivable.
 - . Sales Analysis.
 - . General Ledger.
 - . Purchase Order/Vendor Analysis.
 - . Accounts Payable.
 - . Payroll/Labor Distribution.
 - . Direct Mail.
 - . Security.
- Word processing, spreadsheet, and graphics packages are also available with BCP.
- The system accommodates single and multicompny processing and features a menu-driven user interface, security tools, and an optional data recovery tool called Restore.
- Other features include zip code expansion to 10 characters, finance charges with variable interest, manual check preparation, partial payment on invoices, premium rates for shift differentials, vendor performance evaluation (product quality, pricing, and delivery), multiple bin locations for inventory, and free-form text entry in the order entry module.
- The BCP Support Application Supplements are standard with each package. Included are data base management features for creating company, customer, and vendor listings; facilities for generating custom reports and displays; a general ledger interface; and audit reports.
- BCP interfaces with SMI's Manufacturing Control System.
- BCP modules range in price from \$4,000 to \$7,000. The complete BCP software system ranges in price from \$40,000 to \$70,000.
- There are currently over 400 combined software package and turnkey installations of BCP.
- . Warehouse Distribution Control System is an integrated set of programs for complete warehouse management. The system incorporates dynamic location assignment/reassignment and automatic pick routing, together with BCP applications.

SYSTEMS MANAGEMENT, INC.

- SMI's Manufacturing Control System (MCS) is designed to support the discrete/job shop manufacturing environment (assemble-to-order, make-to-order, make-to-stock). The applications in MCS provide management with information for monitoring all aspects of manufacturing operations and controlling the flow of work.
 - MCS applications modules include:
 - Bill of Material.
 - Inventory Control.
 - On Order.
 - Master Schedule.
 - Production Work Order.
 - Material Requirements Planning.
 - Work in Progress.
 - Capacity Planning.
 - Input-Output Control.
 - The application modules may operate independently or as an integrated system. Modules range in price from \$4,000 to \$14,000. The total MCS software system license ranges from \$40,000 to \$100,000.
 - There are currently over 300 MCS systems installed.
 - SMI is currently developing the Job Costing Control System (JCCS), a module designed to run with MCS. JCCS is for use by job shop companies and manufacturers of custom-designed specialty products. Labor distribution analysis and payroll systems are also under development.
- Ten percent of SMI's revenue is derived from professional services, including consulting services and custom programming of SMI-developed software.
- In addition to marketing hardware as part of its turnkey systems, SMI sells equipment separately.
 - SMI has distribution agreements to sell Ultimate Computer Company and CIE Systems computers.

INDUSTRY MARKETS

- SMI derived its fiscal 1985 revenue from across industry segments, including manufacturing, wholesale and retail distribution, transportation, state and local government, insurance, and medical.
- Major turnkey clients include Katy Industries, McDonalds, Anheuser-Busch, Toro Company, and the Gearmaster division of Emerson Electric.

SYSTEMS MANAGEMENT, INC.

GEOGRAPHIC MARKETS

- SMI has systems installed in 44 states and 12 countries. INPUT estimates that 90% of the company's revenue is derived from the U.S. and 10% from foreign clients.
- SMI maintains branch offices in Chicago and Orange (CA).

COMPUTER HARDWARE AND SOFTWARE

- SMI maintains the following equipment at its Rosemont headquarters:
 - 1 IBM 4331, PICK.
 - 2 IBM Series/1s, PICK.
 - 2 Microdata REALITYs, PICK.
 - 1 Honeywell Level 6/Ultime, PICK.
 - 1 Digital LSI-II/Ultime, PICK.
 - 2 CIE Systems 680 Series computers.

COMPANY HIGHLIGHT

SYSTEMS MANAGEMENT, INC.
6300 North River Road
Rosemont, IL 60018
(312) 698-4000

George Ridgway, President
Private Corporation
Total Employees: 105
Total Revenue, Fiscal Year End
6/30/83: \$9,451,000
Computer Services Revenue:
\$8,000,000*

THE COMPANY

- Systems Management, Inc. (SMI), incorporated in 1969, develops, markets, and supports software packages and turnkey systems and provides related professional services. The company is also a distributor for various hardware manufacturers and a Value Added Reseller (VAR) for IBM.
- Revenue for fiscal 1983 was \$9.5 million, a 7% decrease from fiscal 1982 revenue of \$10.1 million. A three-year revenue summary follows:

SYSTEMS MANAGEMENT, INC.
THREE-YEAR REVENUE SUMMARY
(\$ thousands)

ITEM	FISCAL YEAR		
	6/83	6/82	6/81
Revenue	\$9,451	\$10,133	\$9,786
• Percent increase (decrease) from previous year	(7%)	4%	(7%)

- Revenue decreases and low growth rates are attributed to clients holding back on capital expenditures during the recession. The company has recently experienced an increase in sales.
- SMI's research and development expenditures increased due to the implementation of the PICK operating system on various computer equipment.
- In November 1982 SMI re-acquired the business of its former ROADS Division, which markets applications software for the trucking industry.

*INPUT estimate

- In June 1983 SMI had 105 employees segmented as follows:

Marketing/sales and administration	42
Technical, diagnostic, and customer support	<u>63</u>
	105

- SMI considers its major competition to come from ASK Computer Systems, Management Science America, and Software International.

KEY PRODUCTS AND SERVICES

- INPUT estimates SMI's fiscal 1983 revenue was derived as follows:

Turnkey systems	60%
Software products	15
Professional services	10
Hardware sales	<u>15</u>
	100%

- SMI develops, markets, and supports on-line applications software products which are sold both as separate packages or integrated with hardware as turnkey systems.
 - All software packages are written in SMI's internally-developed language, Real-time Processor Language (RPL), which interfaces with the PICK operating system. The products run on the IBM Series/1, 43XX, and CS 9000; Honeywell Level 6/Ultimate, Digital LSI-II/Ultimate, and Microdata REALITY/ Sequel equipment.
 - SMI's Business Control Programs and Manufacturing Control System packages are also available in an ANSI COBOL 74-based version, which runs on Prime 50 Series equipment under PRIMOS.
 - Pricing for hardware included in the turnkey systems ranges from under \$20,000 to \$2 million. Software package pricing ranges from \$1,000 to \$200,000 depending on the number of modules and integrated packages purchased. SMI has a combined total of over 800 software packages and turnkey systems installed.
 - All hardware maintenance support for the turnkey systems is performed by the manufacturers. SMI provides software maintenance for the operating systems, applications software, and its proprietary language, RPL.
 - The exhibit presents a listing of software products marketed by SMI either as part of a turnkey system or as separate packages. Most of the products are sold as turnkey systems with associated hardware.

SYSTEMS MANAGEMENT, INC.

EXHIBIT

SYSTEMS MANAGEMENT, INC.
SOFTWARE PRODUCTS/TURNKEY SYSTEMS

PRODUCT	SOFTWARE PACKAGE PRICE	COMBINED NUMBER OF SOFTWARE PACKAGE AND TURNKEY INSTALLATIONS	
Business Control Programs (BCP)	\$30,000 Complete Package (RPL) \$40,000 Complete Package (COBOL) \$ 1,000-\$6,000 Per Module	400	
Manufacturing Control System (MCS)	\$44,000 Complete Package (RPL) \$70,000 Complete Package (COBOL) \$ 2,000-\$14,000 Per Module	250	
Office Products Dealer System	\$22,000	10	
ROADS	\$28,900-\$47,800	80	
TREADS	\$30,000	4	
Warehouse Distribution Control System	\$30,000	1	
Associations Management System	\$20,000-\$40,000	5	
Cemetery Management	\$10,000-\$40,000	6	
Hotel Management	\$40,000-\$1,000,000 (Sold as a Turnkey System Only)	20	
Medical	\$18,000-\$23,000	10	
Insurance Agency System	\$19,500-\$69,500	28	
TSE Construction System	\$19,600-\$40,000	12	
SMI-CALC Modeling Package	\$ 2,000	} Combined Packages \$7,000	N/A
Word Processing	\$ 3,000		N/A
Graphics Support Package	\$ 3,000		N/A
RPL	\$10,000	N/A	
PICK	\$ 3,000-\$120,000	N/A	

- The products include the following:
 - Business Control Programs (BCP), a general accounting and sales distribution package introduced in 1975, is SMI's top-selling product with over 400 combined software package and turnkey installations. BCP consists of 12 modules which may operate independently or as part of an integrated system.
 - BCP modules include:
 - Order Entry.
 - Billing.
 - Sales Analysis.
 - Inventory.
 - Accounts Receivable.
 - Accounts Payable.
 - Payroll/Labor Distribution.
 - General Ledger/Financial Reporting.
 - Purchase Order.
 - Direct Mail.
 - The system accommodates single and multicompany processing and features a menu-driven user interface, security tools, and an optional data recovery tool called Restore.
 - Other features include zip code expansion to 10 characters, finance charges with variable interest, manual check preparation, partial payment on invoices, premium rates for shift differentials, vendor performance evaluation (product quality, pricing, and delivery), multiple bin locations for inventory, and free-form text entry in the order entry module.
 - The BCP Support Application Supplements are standard with each package. Included are data base management features for creating company, customer, and vendor listings; facilities for generating custom reports and displays; a general ledger interface; and audit reports.
 - BCP interfaces with SMI's Manufacturing Control System.
 - Manufacturing Control System (MCS), introduced in 1976, has over 250 combined software package and turnkey installations and enables managers to monitor and control manufacturing operations. There are nine MCS modules which may operate independently or as an integrated system and interface with BCP, including:
 - Bill of Material (Shop Calendar).
 - Inventory Control.
 - On Order (Master Schedule).
 - Cost Control.

SYSTEMS MANAGEMENT, INC.

- Routing.
 - Work in Process.
 - Material Requirements Planning.
 - Capacity Planning.
 - Input-Output Control.
- Other SMI-developed software products include the following:
 - The Office Products Dealer System, for use by office products dealers, consists of purchasing, inventory management, distribution, and commercial accounting applications.
 - ROADS, designed for the truck dealer industry, consists of general accounting, leasing, parts, and service department features to track sales, inventory, and labor.
 - TREADS, marketed primarily to tire retread dealers, integrates accounting and manufacturing functions to provide detailed costing reports by tire type, size, and/or customer. The package also incorporates a gross margin reports feature.
 - Warehouse Distribution Control System is an integrated set of programs for complete warehouse management. The system incorporates dynamic location assignment/reassignment and automatic pick routing.
- SMI licenses rights for its RPL language to be used in software products owned by other firms, which SMI markets. These include systems for associations, cemetery, and hotel management; medical scheduling and billing; insurance agencies; construction firms; word processing; and graphics.
- Software products currently being developed by SMI include:
 - Job Costing Control System (JCCS), a software module designed to run with MCS. JCCS is for use by job shop companies and manufacturers of custom-designed specialty products.
 - Restaurant Control System (RCS), which includes inventory, meal planning, vendor information, cost analysis, and accounting functions.
 - Human Resource Control System (HRCS), which assists in human resource management and government regulation compliance.
- Ten percent of SMI's revenue is derived from professional services including consulting services and custom programming of SMI-developed software.
- In addition to marketing hardware as part of its turnkey systems, SMI sells equipment separately.

SYSTEMS MANAGEMENT, INC.

- SMI has distribution agreements to sell Prime, Honeywell, Digital Equipment, and Microdata equipment.
- The company became a Value Added Remarketer (VAR) for IBM Series/1 equipment in June 1982 and for 43XX Series and CS 9000 equipment in November 1982.
 - The systems are marketed with SMI's RPL language and the PICK operating system.
 - Support packages available include word processing, graphics, and the SMI-CALC modeling package.

INDUSTRY MARKETS

- SMI derived its fiscal 1983 revenue from across industry segments, including manufacturing, wholesale and retail distribution, transportation, state and local government, insurance, and medical.
- Major turnkey clients include Katy Industries, McDonalds, Anheuser-Busch, Toro Company, and the Gearmaster division of Emerson Electric.

GEOGRAPHIC MARKETS

- SMI has systems installed in 40 states and 10 countries. INPUT estimates that 75% of the company's revenue is derived from the U.S. and 25% from foreign clients.
- SMI maintains branch offices in Chicago, Minneapolis, and Woodland Hills (CA).

COMPUTER HARDWARE AND SOFTWARE

- SMI maintains the following equipment at its Rosemont headquarters:
 - 1 IBM 4331, PICK.
 - 2 IBM Series/1s, PICK.
 - 1 Prime 450, PRIMOS.
 - 1 Prime 550, PRIMOS.
 - 2 Microdata REALITYs, PICK.
 - 1 Honeywell Level 6/Ultimate, PICK.
 - 1 Digital LSI-II/Ultimate, PICK.

COMPANY HIGHLIGHT

SYSTEMS MANAGEMENT INC.
10400 West Higgins Rd.
Rosemont, IL 60018
(312) 298-3840

George Ridgway, President
Private Corporation
Total Employees: 87
Total Revenue, Fiscal Year
End 6/30/81: \$10,130,659

PRINCIPAL BUSINESS

- Systems Management, Inc. (SMI) formed in 1969, develops, markets, and supports applications software packages, retails turnkey systems, and whole-sales hardware and software to third party marketing organizations.

FINANCIALS

- Revenue for fiscal 1981 was \$10,130,659, a 3% decline from the prior year. However, profits increased to \$1,133,000, up 492% from a loss of \$289,000 reported in fiscal 1980.
- Losses in 1980 were attributed to high development costs for software products.
- About \$670,000 of 1981 profits came from a change in accounting policy to defer software enhancement costs rather than expense them as incurred. The remaining profit of \$463,000 resulted from increased sales and efforts made by SMI to return operations to a profitable status.

FIVE-YEAR FINANCIAL SUMMARY (\$ thousands)

ITEM \ FISCAL YEAR	6/81	6/80	6/79	6/78	6/77
Total Revenue	\$10,131	\$10,481	\$ 9,200	\$ 5,200	\$ 4,100
• Percent increase (decrease) from previous year	(3%)	14%	70%	27%	73%
Income Before Taxes	\$ 1,133	\$ (289)	\$ 269	\$ (573)	\$ (470)
• Percent increase (decrease) from previous year	492%	(207%)	147%	(22%)	N/A
Net Income	\$ 1,133	\$ (289)	\$ 269	\$ (573)	\$ (470)
• Percent increase (decrease) from previous year	492%	(207%)	147%	(22%)	N/A

1 of 6
December 1981

SYSTEMS MANAGEMENT INC.

- Financials have not been restated for 1980, 1979, 1978, and 1977 to reflect the 1981 change in accounting policies.

SOURCES OF REVENUE

Turnkey systems	55%
Hardware sales	5%
Software products	30%
Professional services	10%
	100%

DIVESTITURES

- In 1980, SMI sold its processing services business to former employees. The three data centers sold continue to use SMI software under a licensing agreement.
- The ROADS Division was also sold to former employees in 1981. ROADS markets a software product for auto, truck and heavy equipment dealers.

EMPLOYEES

Marketing/sales	11
Software development	11
Customer support and contract programming	48
Technical and diagnostic support	5
General and administrative	
	87

PRODUCTS AND SERVICES

- SMI develops, markets and supports several on-line, real time software products which are sold separately or as turnkey systems. Sales and professional services from these products contribute 95% of SMI's revenue.
 - Prices for the turnkey systems range from \$35,000 to \$250,000 for hardware and \$12,000 to \$100,000 for software. As of November 1981, SMI had sold over 400 turnkey systems.
 - All application software marketed by SMI is written in an internally developed language, Real-time Processor Language (RPL). Two products, Business Control Programs (BCP) and Manufacturing Control System (MCS) have been converted to COBOL.
 - SMI is in the process of converting BCP and MCS for use on the IBM Series 1, 4300, and Personal Computer, using the RL Pick operating system.

SYSTEMS MANAGEMENT INC.

- All systems are operational on Microdata REALITY, Honeywell Level 6/Ulimate, Digital LSI-11/Ulimate, ADDS Mentor, and Evolution computer hardware.
- All hardware maintenance support is performed by the manufacturers. SMI provides on-line software maintenance for the operating system, applications software, and its language, RPL.
 - The software user is charged an annual fee equal to 10% of license fees, plus \$1,000 for RPL support and enhancements.
- Products marketed by SMI are:
 - Business Control Programs (BCP), introduced in 1975, has been the most successful generator of all products marketed by SMI. It includes 14 modules which operate independently or as part of an integrated system. They are:
 - Order entry.
 - Billing.
 - Sales analysis.
 - Inventory control.
 - Accounts receivable.
 - Accounts payable.
 - Payroll.
 - General ledger.
 - Purchase order.
 - Direct mail.
 - Labor distribution.
 - Job costing.
 - Financial consolidations.
 - File balancing and system assurance.
 - SMI has modified several of its Business Control Programs into industry-specific packages. These include:
 - The Office Products System, for use by office products companies, which consists of purchasing, inventory management, distribution, and commercial accounting applications.
 - A Professional Services Control System for scheduling, billing, reporting, payroll, and general accounting for groups of doctors, lawyers, accountants, engineers, and architects.
 - Club accounting and trade associations are provided applications for activity scheduling, direct mail, membership (subscription) maintenance, in addition to financial control and reporting.
 - Manufacturing Control System (MCS), introduced in 1976, provides tools for planning, monitoring and control of manufacturing operations. MCS

is SMI's fastest growing product. It consists of 250 programs, organized into nine modules, which may interface with BCP. They are:

- . Bill of materials.
 - . Inventory control.
 - . On-Order (master schedule).
 - . Cost control.
 - . Routing.
 - . Work in progress.
 - . Material requirement planning.
 - . Capacity planning.
 - . Input-output control.
- Job Costing Control System (JCCS) is a subset of MCS for job shop companies and manufacturers that make custom designed specialty products. JCCS collects costs and may be used in conjunction with MCS or as a standalone system.
 - Restaurant Control System (RCS) includes inventory, meal planning, vendor information, cost analysis, and accounting functions.
 - Human Resource Control System (HRCS) assists in human resource management and government regulation compliance.
 - Warehouse Control System (WCS) is an integrated set of programs for complete warehouse management. It incorporates dynamic location assignment/reassignment and automatic pick routing.
 - SMI licenses rights for its RPL language to be used in software products owned by other firms, which SMI markets. These are an insurance agency system, a medical scheduling and billing package, a hotel management system, and a cemetery management system.
- Prices of SMI's software and the number of installations are presented in the exhibit.
 - Ten percent of SMI's revenue is derived from professional services for installation and custom modification of its software products.
 - SMI is an OEM distributor for Prime, Honeywell/Ultimate, Digital/Ultimate, Microdata REALITY, and Sequel. Hardware sales to third-party distributors account for 5% of SMI's revenue, and wholesale software sales account for 6%.

EXHIBIT

SOFTWARE PRODUCTS

PRODUCT	PRICE	NUMBER OF INSTALLATIONS
Business Control Programs (BCP)	\$26,000 Complete Package (RPL)	125
	\$38,000 Complete Package (COBOL)	
	\$ 2,000 per Module	
Manufacturing Control System (MCS)	\$36,000 (RPL)	45
	\$50,000 (COBOL)	
Office Products System	\$22,000	5
Professional Services Control System	\$20,000	20
Restaurant Control System (RCS)	\$15,000	2
Human Resource Control System (HRCS)	\$15,000	3
Job Costing Control System (JCCS)	\$15,000 (with MCS)	4
	\$35,000 (Standalone)	
Cemetery Management	\$20,000	4
Hotel Management	\$28,000-\$60,000	12
Medical	\$12,000	10
Insurance Agency System	\$28,000	20
Warehouse Control System (WCS)	\$30,000	5

SYSTEMS MANAGEMENT INC.

INDUSTRY MARKETS

Manufacturing	50%
Wholesale	20
Retail	10
Transportation	5
Insurance	5
Medical/Hospital	5
State and Local	
Government	<u>5</u>
	100%

- Major turnkey clients include Katy Industries, McDonalds, British Leland, Ltd., Plessey Ltd., Toro Company and Quasar.

GEOGRAPHIC MARKETS

- With the exception of about 15 systems, most U.S. installations of SMI's products are in Chicago, Minneapolis and St. Louis metropolitan areas.

U.S.		70%
Chicago	(40%)	
Minneapolis	(10%)	
St. Louis	(5%)	
Other	(15%)	
International		30%
U.K.	(20%)	
Canada	(5%)	
Other	(5%)	

- SMI maintains branch offices in Chicago (IL), Minneapolis (MN) and Los Angeles (CA).

COMPUTER HARDWARE AND SOFTWARE

1 Prime 550, PRIMOS.
9 Microdata REALITY, Pick.
1 Honeywell Level 6, Ultimate (Pick).
1 Evolution 280, Pick R-80.
1 Digital LSI-11, Ultimate (Pick).

COMPANY HIGHLIGHT

SYSTEMS MANAGEMENT, INC.

10400 West Higgins Road
Rosemont, IL 60018
(312) 298-3840

George Ridgway, President
John P. Higginson, Jr., Executive
Vice President
Private Corporation
Total Employees: 89
Total Revenues, Fiscal Year End
6/30/79: \$9,200,000
Computer Services Revenues:
\$3,220,000 (Approx.)

THE COMPANY

- Systems Management, Inc. (SMI) was formed in 1969 by George Ridgway to provide EDP consulting services to clients in the Chicago area. The company has since evolved into an OEM distributor, a software development and marketing organization for minicomputer applications, and a remote computing services vendor. SMI management claims it is the only computer services vendor currently offering real time transaction processing software for minicomputers.
- Revenues in 1979 were \$9.2 million, a 70% increase over 1978 revenues of \$5.4 million. Management states the company has been profitable with the exception of 1977 and 1978 when \$3 million was expensed for the development of software. Losses reported during this two year period were approximately \$500,000 each year.
 - The money spent in the development effort appears to be paying off. Although hardware sales represented 65% of SMI's revenues in FY 1979, it generated only 28% of the company's pretax profits. Software sales represented 25% of total revenues and contributed 50% of the pretax profit margins. Network services generated the remaining 10% of revenues and contributed 22% of pretax profits.
 - SMI expects 1980 revenues will be approximately \$16 million. Of this, 30% is expected to come from software sales.
 - Management also states that the \$3.8 million gain in revenues achieved in 1979 was accomplished by adding only two additional employees.
 - A five year financial summary follows:

SMI
FIVE YEAR FINANCIAL SUMMARY
(\$ Thousand)

ITEM \ FISCAL YEAR	1979	1978	1977	1976	1975
Total Revenues	\$9,200	\$5,400	\$4,100	\$2,600	\$1,500
Percent increase from previous year	70%	32%	58%	73%	25%

COMPANY HIGHLIGHT/SYSTEMS MANAGEMENT, INC.

- In Management Information Corporation's 1978 small business systems user survey, SMI was the only software company which achieved the honor roll.
- SMI's 89 employees are divided as follows:

- Marketing	16
- Software Development	14
- Customer Support	47
- Computer Operations	2
- General and Administrative	<u>10</u>
	89

KEY PRODUCTS AND SERVICES

- Approximately 65% of SMI's FY 1979 revenues were derived from OEM minicomputer sales, 25% from software products, and 10% from processing services.
- SMI is an OEM distributor for Microdata Reality, Prime Computer, and for Honeywell Ultimate Level 6 systems.
- Twenty-five percent of SMI's 1979 revenues (\$2.3 million) were derived from software product sales. Although the software products marketed are operational on all the OEM systems marketed by SMI, the company does not consider itself a turnkey systems vendor. SMI prefers to sell its software on an unbundled basis.
 - The software product offerings fall into the following four categories:
 - The Business Control Program (BCP), introduced in 1975, is an integrated general business system. Although the product is marketable to any type of business, there are a higher percentage of users in the distribution industry. It contains 14 separate modules which are sold for approximately \$2,000 each. There are currently 110 to 115 customers of BCP and SMI averages about \$7,000 in software revenues per customer. Arthur Andersen & Company has also obtained licensing rights to market the BCP software to their clients. Available modules are:

- Order Entry.
- Billing.
- Inventory Control.
- Accounts Receivable.
- Accounts Payable.
- Payroll.
- General Ledger.
- Purchase Order.
- Sales Analysis.
- Direct Mail.
- Labor Distribution.

COMPANY HIGHLIGHT/SYSTEMS MANAGEMENT, INC.

- Job Costing.
- Financial Consolidations.
- Restore (A File Balancing and System Assurance Module).

The Manufacturing Control System (MCS), introduced in late 1976, is an integrated system which can also be connected to applications offered within the Business Control Program. Although the system is priced on a modular basis (about \$4,000 per module), most clients purchase the entire system for approximately \$40,000. There are 20 installations of MCS at the present time. Although SMI has targeted manufacturing companies in the \$10-\$50 million dollar range, the company has several clients who are in the \$1 billion or more revenue range.

Application modules are:

- Bill of Materials.
- Inventory Control.
- On-Order Module.
- Requirement Planning.
- Work-In-Process.
- Costing.
- Operational Routing.
- Capacity Planning.
- Shop Floor Control.

The Health Care System, a modified version of the Business Control System, is offered with applications to perform scheduling, billing, and service analysis for medical clinics. First offered in 1977, SMI has the system installed in nine clinics at the present time. Software revenues average about \$13,000 per installation.

- SMI is in the process of developing an information system in conjunction with Rush Presbyterian St. Luke's Hospital in Chicago. Targeted at hospitals in the 50 to 450 bed range, SMI plans to offer the software for about \$40,000. Use of the system for a 50 bed hospital will run about \$3.00 per patient day and less than \$1.00 per patient day for hospitals with 300 or more beds. Available applications will include:

- . Admitting Transfer and Discharge.
- . Complete Accounting System (see BCP).
- . Third Party Practice Insurance.
- . Data Collection and Transfer.
- . Resource Management and Utilization Review.
- . Medical Audit and Exception Report.
- . Training, Security, Outpatient, and Medical Records Modules.
- . Funding.

SMI has modified several of its business and manufacturing control systems into industry-specific packages. These include:

COMPANY HIGHLIGHT/SYSTEMS MANAGEMENT, INC.

- The Office Products System which consists of purchasing, inventory management, distribution, and commercial accounting applications for use by office products companies. Introduced in 1979, Office Products sells for about \$22,000. Two system are currently installed.
- A construction package has been developed for job costing, accounting, reporting, project and property management, and estimating. Eleven have been installed since 1977 at an average cost of \$17,000.
- A professional services control system has been generated from BCP for scheduling, billing, reporting, payroll, and general accounting for groups of doctors, lawyers, accountants, engineers, architects, and other such groups.
- Club accounting and trade associations are provided applications for activity scheduling, direct mail, membership (subscription) maintenance, in addition to financial control and reporting. Fifteen systems are in operation on in-house systems and also through SMI's network service. Average cost for this group of applications is about \$8,000.
- All application software marketed by SMI has been written using an internally developed language called Real-Time Processor Language (RPL). SMI software is currently available for operation on Microdata Reality, Prime Computer, HIS Ultimate Level 6 and Mini 6, Inter-technique Multi 6, and Evolution computers. Development efforts are currently underway to offer versions in interactive COBOL to run on a wide range of IBM, Honeywell, Univac and Burroughs equipment.
- SMI has also licensed rights for RPL to be used in the development of a complete insurance system (Improved Insurance Company of Chicago) and for a hotel/motel information system (Hotel Datapax in Houston).
- Remote computing services revenues contributed approximately \$900,000 in 1979 revenues.
 - Called the SMI Data Shop, clients are offered the same application software as that sold separately. Applications are available on an interactive, remote batch, or batch basis.
 - SMI currently has approximately 130 users of its processing service. Customers spend an average of \$450 per month.

INDUSTRY MARKETS

- SMI's industry market revenues are estimated as follows:

- Manufacturing	40.0%
- Business services	25.0
- Distribution	20.0
- Hospitals/Medical	2.5
- Education	2.5
- Other	<u>10.0</u>
	100.0%

GEOGRAPHIC MARKETS

- Approximately 80% of SMI's revenues are derived from domestic sales and 20% from foreign operations.
- SMI maintains sales offices in Chicago and Minneapolis.
- Distributors of SMI's products are located in Cedar Rapids, St. Louis, Tulsa, Milwaukee, Green Bay, Kansas City, Washington, DC, San Francisco, Houston, Tokyo, Hong Kong, Sydney, London, and Singapore.

COMPUTER HARDWARE

- SMI operates or has a distributor arrangement to provide processing services from eight U.S. and one overseas data center.
 - One Prime 450 computer is used for providing processing services from the headquarters location in Rosemont. The other centers use Microdata Reality systems.
 - Clients access the network via leased or dial-up lines.



COMPANY HIGHLIGHT

SYSTEMS PLUS INC.
1120 San Antonio Road
Palo Alto, CA 94303
(415) 969-7047

Richard W. Mehrlich, President
Private Corporation
Total Employees: 27
Total Revenue, Fiscal Year End
1/31/83: \$4-\$6 million*

THE COMPANY

- Systems Plus Inc., founded in 1980 by Richard W. Mehrlich, is a distributor of systems and applications microcomputer-based software packages.
- As of July 1983 Systems Plus had 27 employees segmented as follows:

Marketing/sales	11
Software services/ customer support	7
General and administrative	<u>9</u>
	27

- Competition comes from Micro D and Softsel.

KEY PRODUCTS AND SERVICES

- One hundred percent of Systems Plus fiscal 1983 revenue was derived from the distribution of on-line microcomputer applications and systems software products and related services.
 - The company currently markets products to 1,960 U.S. and 140 international wholesale and retail outlets, OEMs, and other independent sales organizations. The estimated number of end users is over 10,000.
 - All packages are developed by independent software vendors, although some products are modified to Systems Plus specifications.
 - The products run under the CP/M, MP/M, MS-DOS, Personal Computer DOS, Apple DOS, and COS-310 operating systems on microcomputers from vendors including Apple, IBM, Televideo, Altos, DEC, Xerox, Kaypro, CompuPro, Eagle, and Dynabyte.
 - A listing of available products is presented in the exhibit.
- Systems Plus originally distributed cross-industry software products. The company has recently emphasized products for vertical markets, primarily in the real estate, medical, and CPA services industries.

*INPUT estimate

EXHIBIT
SYSTEMS PLUS
SOFTWARE PACKAGES

PRODUCT	DESCRIPTION	INDEPENDENT VENDOR
Accounting Plus	Accounting and inventory system. CP/M and MP/M compatible.	ASK Micro Inc.
Accounting Plus II	Inventory and general ledger system for the Apple II or Apple II Plus.	ASK Micro Inc.
Accounting Plus Super/e	Accounting and inventory system for the Apple IIe.	ASK Micro Inc.
Accounting Plus 86	Accounting and inventory system for the DEC Rainbow 100.	ASK Micro Inc.
Accounting Plus PC	Accounting and inventory system for the IBM Personal Computer.	ASK Micro Inc.
The BusiSoft Analyzer	Financial statement analysis program.	BusiSoft Corporation
CIS COBOL	COBOL compiler.	Digital Research
Client Manager	Automated general ledger and financial book-keeping system.	Falcon Systems
dBASE II	Relational data base management system.	Ashton-Tate
DPATCH	File and data recovery system.	Advanced Micro Techniques
FMS-80	File management system.	DJR Associates
The Landlord	Income property management system.	MIN Microcomputer Software
MailMerge	Optional WordStar file merging program.	MicroPro International Corporation
Medical Manager	Medical office accounting package.	Personalized Programming
Micro LIB	Disk filing system.	Advanced Micro Techniques
Micro TLX	Telex machine emulator.	Advanced Micro Techniques
The Wedge	Electronic worksheet program.	Access Software
WordStar	Word processing system.	MicroPro International Corporation

- The company's most successful products include the following:
 - The Landlord, designed by MIN Microcomputer Software, Inc., manages all types of income property. The package is comprised of two major subsystems: the Property Manager, which automates property management recordkeeping, and the Financial Manager, an accounting system for keeping books on a cash basis. Features include:
 - An information file for each rental unit and tenant.
 - Recording of all tenant charges and payments.
 - Printing of tenant statements for use as payment receipts.
 - Tracking of security and other deposits.
 - Slow payment identification.
 - Upcoming vacancy reports.
 - Lease expiration information.
 - Property expense monitoring, including monthly property income and expense analyses.
 - Tax analysis adjusted for individual structures.
 - Reports printed for each individual property managed, as well as summary reports for each owner or all properties on the system.
 - Client Manager, designed by Falcon Systems, allows small businesses, accounting, and bookkeeping firms to perform all necessary general ledger functions. The system supports multiple clients under a multi-user environment as well as multiple departments, subsidiaries, divisions, and companies. Subsystems include the following:
 - General Ledger is composed of the ledger setup, for definition of unique system features, and the accounting cycle, which handles all accounting tasks.
 - Journal Process enters transactions to defined journals, which are then posted to the General Ledger.
 - Employee Payroll File maintains payroll information based on wages, tips, nontaxable income, and other income. The system provides after-the-fact payroll accumulation including printing of W-2s, 941s, and employee continuation sheets.
 - Budget and History supports budgeting and previous-year comparisons.
 - Recurring Entries generates amortization schedules and calculates depreciation.
 - Check Reconciliation provides check and bank account reconciliation.
 - Report Writer generates fixed-format or optional user-defined formatted statements.

- Medical Manager, designed by Personalized Programming, Inc., facilitates group and individual medical practice management. Components of the system include:
 - Data Maintenance, which performs data management functions with features including menus, editing routines, and self-formatting fields.
 - Communication with Guarantors and Insurance Companies, which processes claims for multiple insurance companies' patients and provides automatic crediting and other partial payment handling to secondary insurance companies. Ailment history data by patient is also available.
 - Management Information, which maintains data by physician for group practices. The system reports on guarantor and financial activity, procedures performed, and accounts receivable.
 - Accountability-Audit Trail, which tracks guarantor accounts receivable and outstanding insurance claims and provides open item payment history and detail and summary aging reports.
 - An Office Management option, which reports on patient medical history and physician schedules in categories including hospital rounds, clinical (drug and allergy) history, procedure and diagnosis history, frequency and revenue (productivity), and appointments/recall management.
- Accounting Plus, from ASK Micro Inc. (formerly Software Dimensions), is a family of packages that incorporates both accounting and inventory control functions for use on specific microcomputers. The various systems are available with five to eight different modules including:
 - General ledger.
 - Accounts receivable.
 - Accounts payable.
 - Purchase order.
 - Sales order.
 - Inventory control.
 - Payroll.
 - Point of sale.
- dBASE II, developed by Ashton-Tate, is a relational data base management system using English-like commands for simple data manipulation. A source book is available for development of applications using dBASE II; it includes the following areas:
 - Accounting, job costing, and inventory control tax computation.
 - Scheduling, mail list, and production management.
 - Real estate brokerage and property management.

SYSTEMS PLUS INC.

- Securities portfolio analysis.
 - Medical management.
- Systems Plus provides a variety of customer and technical support services.
 - Software product and sales training seminars are available at the company's Palo Alto headquarters and in other cities throughout the country.
 - Technical support specialists operate a hotline service Monday through Friday from 7 a.m. to 5 p.m. (PST).
 - INTERFACE is a bimonthly newsletter that provides information on new products and services.
 - DIAGNOSTIC DISK, priced at \$50, provides the nontechnical user with programming tools to facilitate data file diagnosis and problem correction.
 - Audio visual slide displays recently became available for use at retail stores or for outside sales or training presentations. The Landlord property management and Medical Manager medical practice management packages are the only products currently available in this form, with prices ranging from \$150 to \$650.

INDUSTRY MARKETS

- Systems Plus fiscal 1983 revenue was generated as follows:

Retail distribution	60%
Wholesale distribution	30
OEMs	<u>10</u>
	100%

GEOGRAPHIC MARKETS

- Ninety-five percent of Systems Plus fiscal 1983 revenue was derived from across the U.S. The remaining 5% was from international markets including Canada, Australia, Africa, and the United Kingdom.

COMPUTER HARDWARE AND SOFTWARE

- Systems Plus maintains over 31 microcomputers running under CP/M, MS-DOS, Apple DOS, Personal Computer DOS, MP/M, and COS-310 at its Palo Alto headquarters, including Altos, Apple, DEC, IBM, Eagle, Dynabyte, Tele-video, CompuPro, Kaypro, and Xerox.

COMPANY PROFILE

SYSTEM SOFTWARE ASSOCIATES, INC.

200 West Madison
Suite 3200
Chicago, IL 60606
(312) 641-2900

Roger E. Covey, Chairman and President
Public Corporation, OTC
Total Employees: 400 (1/90)
Total Revenue, Fiscal Year End
10/31/89: \$94,952,000

The Company

System Software Associates, Inc. (SSA), founded in 1981, develops, markets, and supports two software products.

- BPCS (Business and Planning Control System) is an integrated line of business software for manufacturing, financial and distribution management applications designed to run on IBM's AS/400 and System 3/X midrange computers.
- The company's second product, AS/SET™, was introduced in November 1989. AS/SET is a software engineering technology CASE tool designed exclusively for software applications design, development, and maintenance on the AS/400.

SSA's products are marketed in 30 countries through SSA's major accounts division, SSA branch offices, and an Affiliate Business Partner Network of 58 independent companies around the world.

During 1987, SSA acquired three of its affiliate operations and established a Corporate Customer Support group, all of which provide professional services on a fee basis.

During 1987, SSA also entered into the hardware business as a result of its acquisition of ASE Services, Inc. (an IBM Industry Remarketer) and the introduction of its computer-integrated manufacturing (CIM) product, CIMPath™.

In February 1987, SSA made an initial public offering of approximately 1.4 million shares of common stock, of which over 900,000 shares were offered by SSA and the remaining shares by selling stockholders. Net proceeds to the company of approximately \$10.5 million have been used primarily for the acquisitions made during fiscal 1987.

SSA declared 3-for-2 splits in January 1989 and again in December 1989.

Fiscal 1989 revenue reached \$95 million, a 54% increase over fiscal 1988 revenue of \$61.5 million. Net income rose 78%, from \$6.2 million in fiscal 1988 to over \$11.1 million in fiscal 1989. A five-year financial summary follows:

**SYSTEM SOFTWARE ASSOCIATES, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	10/89	10/88	10/87	10/86	10/85
Revenue	\$94,952	\$61,525	\$30,893	\$16,087	\$9,439
• Percent increase from previous year	54%	99%	92%	70%	138%
Income before taxes	\$17,968	\$9,750	\$5,962	\$3,260	\$1,953
• Percent increase from previous year	84%	64%	83%	67%	93%
Net income	\$11,140	\$6,248	\$3,302	\$1,760	\$1,055
• Percent increase from previous year	78%	89%	88%	67%	91%
Earnings per share (a)	\$0.94	\$0.53	\$0.30	\$0.19	\$0.13
• Percent increase from previous year	77%	77%	58%	46%	63%

(a) Restated to reflect a 3-for-2 common stock split, effected as a stock dividend, effective January 12, 1990.

SSA management attributes revenue increases to the success of the company's BPCS product line for IBM's AS/400 line of computers, the continued expansion of the company's global affiliate network, international major accounts transactions, and strong performance by its London, Chicago, Boston, and Sydney branches.

Past acquisitions made by SSA include the following:

- In October 1987, SSA acquired certain assets and the business of Admin EDP Pty Ltd., its Australian affiliate, for approximately \$2.1 million in cash and 29,815 shares of common stock.

- In June 1987, SSA acquired Outlook, Inc., a provider of decision support software for the IBM 3X product line.
- In June 1987, SSA acquired ASE Services, Inc., its New England affiliate, for \$4.2 million in cash and 16,833 shares of common stock.
- In December 1986, SSA purchased Syncrocom, Inc., its Chicago area affiliate, for approximately \$540,000 in cash and stock.

SSA's primary worldwide competitor is IBM and its MAPICS product.

Key Products and Services

Approximately 83% of SSA's fiscal 1989 revenue was derived from applications software products and hardware sales. The remaining 17% of revenue was derived from client support services.

A three-year source of revenue summary follows:

SYSTEM SOFTWARE ASSOCIATES, INC. THREE-YEAR SOURCE OF REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR					
	10/89		10/88		10/87	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software products	\$79.2	83%	\$44.9	73%	\$26.1	84%
Client support	(a)	(a)	9.4	15%	3.1	10%
Hardware	(a)	(a)	7.2	12%	1.7	6%
TOTAL	\$95.0	100%	\$61.5	100%	\$30.9	100%

(a) Hardware sales are now reported with software sales. Separate figures are not available.

SSA's primary software product line--known as the Business Planning and Control System (BPCS)--consists of over 25 integrated products designed for manufacturing, distribution, and financial applications for IBM AS/400, System/38, and System/36 computers.

In June 1988, SSA announced the availability of its complete line of products (BPCS/400) in native mode on the AS/400

concurrently with the IBM announcement of this new line of midrange computers. SSA expects that the AS/400 will be the primary platform for its products in the foreseeable future.

SSA's current BPCS products include the following:

- **Manufacturing Products**
 - **Material Requirements Planning (MRP)** identifies purchasing and production scheduling actions that are needed in response to day-to-day events.
 - **JIT/Repetitive Manufacturing** provides support for just-in-time manufacturing techniques and support for repetitive process manufacturers (not available for the System/36).
 - **Manufacturing Data Management** allows the retrieval and use of product structure and routing information for planning and costing needs.
 - **Shop Floor Control** provides current status of jobs, work-in-process, and production activity to permit detailed planning and scheduling.
 - **Master Production Scheduling** identifies production planning actions that need to be taken in response to day-to-day events and ties overall business planning to detail operations.
 - **Capacity Planning** identifies potential capacity bottlenecks and backlog problems so that adjustments can be made.
 - **Cost Accounting** controls purchasing, jobs, and manufacturing cost information.
 - **Performance Measurement** provides feedback and accountability in several key management areas to allow executives to monitor performance of their business against plan (not available for the System/36).
 - **CIMPath** automates data collection and updates from the plant floor or distribution center via scanners, magnetic card readers, hand held devices, voice input, scales, and other devices.
 - **Advanced Process Industries**, introduced in 1988, supports process industry companies in application areas such as lot level potency, batch balancing, physical versus theoretical

quantities, full notes subsystems, lot tracking, and traceability.

- **Distribution Products**

- **Inventory Management** allows processing of information on finished goods, work-in-process, and raw material inventory and provides summary and detail analysis on demand for both accounting and production control purposes.
- **Distribution Resources Planning (DRP)** identifies demand on distribution centers and resulting impact on resupply facilities and presents transportation loading and scheduling information (not available for the System/36).
- **Order Processing** processes entry and disposition of customer orders; provides automatic pricing, inventory allocation, and information for production and accounting projections; and allows printing of customer acknowledgements and shipping documents.
- **Billing and Sales Analysis** allows customer orders to be billed after shipment. Invoices are printed and inventory, sales, and accounting information is maintained automatically.
- **Purchasing** links planning, requisitioning, receiving, and inspection to inventory stocks to permit evaluation of vendors and purchasing performance; and prints purchase orders and receiving documents.
- **Forecasting** provides for statistical forecasts of future customer sales.

- **Financial Products**

- **General Ledger and Financial Retrieval System** provides for accumulation of financial information to support accounting functions and allows analysis of information for management decision making; and allows for user-defined financial reporting.
- **Accounts Payable** provides for the control and processing of payables information.
- **Accounts Receivable** collects and disseminates cash flow information aimed at accelerating collection, assessing credit, and reducing bad debt.

- Multi-Currency provides multiple currency operations for the financial, inventory, order processing, billing, and sales applications.
- Currency Translation allows consolidation, reporting, and analysis of multiple currency financial data.
- Payroll (U.S. only) provides control and processing of payroll information with tax calculations, supporting all 50 states. The system allows user-defined deductions, prints checks, and produces tax reports.
- Decision Support Products
 - Information Retrieval provides access to the applications data base; allows technical and non-technical end users to access information from up to 15 files at once, manipulate that information, and output it in the form of reports, online graphs, or file interfaces.
 - Business Modeling provides full function spreadsheet capabilities as well as a direct data base interface to any existing application.
 - Electronic Mail allows users to create, send, receive, file, and print communications electronically (not available on the System/36).

SSA has licensed over 32,000 BPCS products to over 4,000 companies worldwide.

- The BPCS products currently range in price from \$3,000 to \$30,000 per product.
- Annual maintenance fees are 12% of the current list price for each installed product.
- Significant new Major Account clients added during fiscal 1989 for BPCS on the AS/400 included British American Tobacco, GEC, Kraft, Philips Petroleum, 3M, Pepperidge Farm, Stone Container, Texaco, and Unilever.

SSA introduced its second product, AS/SET, in November 1989. AS/SET is a CASE software engineering tool designed to increase programmer/analyst productivity on the IBM AS/400.

- AS/SET became available on January 31, 1990. The product

ranges in price from \$20,000 to \$70,000, depending on the number of users and the AS/400 model used.

Affiliates are responsible for product installation and support services. SSA provides technical, applications, and sales training; marketing and technical support; and emergency customer service to its affiliates. SSA also takes primary sales responsibility for large accounts.

Industry Markets

SSA's revenue is derived primarily from the discrete manufacturing, process manufacturing, and distribution industries.

The target markets for the BPCS product line include manufacturers and distributors with annual revenue ranging from \$10 million to \$300 million and divisions and subsidiaries of larger companies.

Currently, the majority of the company's customers are intermediate sized companies. However, with the global management capacities of the BPCS product line, a significant and increasing portion of sales are to larger companies. To date, SSA has made sales to divisions or subsidiaries of over 150 of the combined Fortune 500 and Fortune International companies.

Geographic Markets

Approximately 56% of SSA's fiscal 1989 revenue was derived from the U.S. The remaining 44% was derived from various international sources.

A three-year summary of source of revenue follows:

SYSTEMS SOFTWARE ASSOCIATES, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)

	FISCAL YEAR					
	10/89		10/88		10/87	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$53.7	56%	\$36.6	59%	\$19.3	62%
Europe/Middle East	23.4	25%	13.4	22%	4.0	13%
Asia/Pacific	14.1	15%	8.1	13%	5.2	17%
Canada/Latin America	3.8	4%	3.4	6%	2.4	8%
TOTAL	\$95.0	100%	\$61.5	100%	\$30.9	100%

The entire BPCS product line is available in English, and substantially all of the line is available in French, German, Hebrew, Ideographic Chinese, Italian, Japanese, Korean, and Spanish.

SSA regional offices are located in Chicago and Boston, London, Sydney, Singapore, and Tokyo.

COMPANY BRIEF

Primary Industry-Specific Market: Manufacturing

Systems Software Associates, Inc.

200 West Madison
Suite 2850
Chicago, IL 60606
(312) 641-2900

CEO: Roger E. Covey, President
Private Company
Founded: 1981

Employees: 40 (7/86)
Revenue (FYE 12/31/85): \$17 million

The Company: Provides IBM System/36 and System/38-based application software for the discrete manufacturing industry

Source of Revenue:

- Application Software (100%)

Key Products:

- Application Software (Utilizes IBM System/36 and System/38)
 - MRP II
 - Inventory
 - Accounting

Target Industries:

- Discrete Manufacturing (100%)

Geographic Markets:

- U.S. and Non-U.S.
- Company has distributors in 25 U.S. and 25 non-U.S. cities
- 100% of sales are through distributors

Significant Events:

- Planning to make a public stock offering in 1987

October 1986

